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ABSTRACT

A report on veterinary medical education in Florida and the need for veterinary care in Florida is presented. Overviews of the veterinary profession and veterinary medical education are also given, including the areas of history, careers in the field, licensure, salaries, animal disease research, accreditation, curriculum, enrollment, educational contracts, and tuition and fees. Information on the labor market for veterinarians in the United States, the South, and Florida is presented. There is information on the University of Florida's veterinary education program, with attention to admissions, the curriculum, degrees, the veterinary medical teaching hospital and educational facilities, minority access and retention, faculty, and continuing education and extension services. Consideration is also given to the veterinary technician profession, earnings in private practice, the nature of veterinary technology education, and veterinary technolgy programs in Florida. The issue of the large number of veterinarians who are trained in foreign veterinary schools and who seek licensure by examination in Florida is also addressed. (SW)

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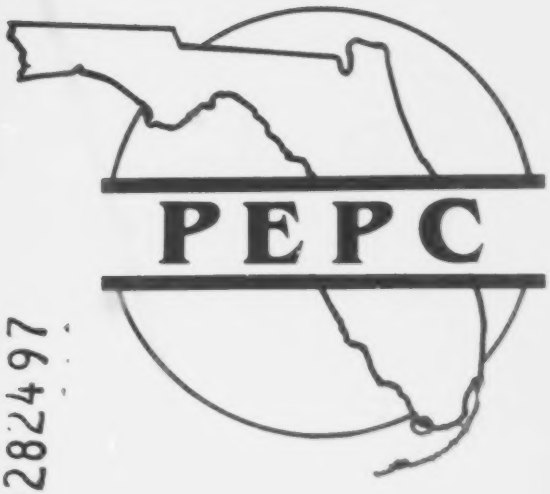

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VETERINARY MEDICAL EDUCATION IN FLORIDA

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Report and Recommendations of the Postsecondary Education Planning Commission

1987 - REPORT 3

POSTSECONDARY EDUCATION PLANNING COMMISSION

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The Postsecondary Education Planning Commission, initially created by executive order in 1980 and subsequently given statutory authority, serves as an advisory body to the State Board of Education on all postsecondary education matters. The Commission is composed of 11 members of the general public and one full-time student registered at a postsecondary education institution in Florida. Members are appointed by the Governor with the approval of three members of the State Board of Education and subject to confirmation by the Senate.

The major responsibility of the Commission is preparing and updating every five years a master plan for postsecondary education. The enabling legislation directed that the Plan "shall include consideration of the promotion of quality, fundamental educational goals, programmatic access, needs for remedial education, regional and state economic development, demographic patterns, student demand for programs, needs of particular subgroups of the population, implementation of innovative educational techniques and technology, and the requirements of the labor market. The capacity of existing programs, in both public and independent institutions, to respond to identified needs shall be evaluated and a plan shall be developed to respond efficiently to unmet needs."

Other responsibilities include recommending to the State Board of Education program contracts with independent institutions; advising the State Board regarding the need for and location of new programs and branch campuses of public postsecondary education institutions; reviewing public postsecondary education budget requests for compliance with the State Master Plan; recommending to the Commissioner of Education proposals for support through the Postsecondary Cooperation Trust Fund; and periodically evaluating the State's 28 regional coordinating councils for vocational education, adult general education and community instructional services.

Further information about the Commission, its publications, meetings and other activities may be obtained from the Commission office, 304 Knott Building, Department of Education, Tallahassee, Florida, 32301; telephone (904) 488-7894.

POSTSECONDARY EDUCATION PLANNING COMMISSION

VETERINARY MEDICAL EDUCATION

IN

FLORIDA

Prepared in Response to

Specific Appropriation 521

of the

1986 General Appropriations Act

(Chapter 86-167, Laws of Florida)

1987 - Report 3

February 19, 1987

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EXECUTIVE SUMMARY

Comprehensive Health Professions Education Plan

At the request of the 1982 Legislature, the Postsecondary Education Planning Commission developed an outline for a comprehensive health professions education plan for the State of Florida. Submitted to the Legislature in March 1983, the outline recommended that the Postsecondary Education Planning Commission undertake a series of reports in the different health professions education areas. Seventh in the series, the report on veterinary education follows reports on nursing, public health, dentistry, chiropractic, medical education, and allied health education.

In the proviso to Appropriation Item 521, the 1986 Legislature more specifically directed the Postsecondary Education Planning Commission to:

> "continue the development of a comprehensive health professions plan for the State. Priority in 1986-87 shall be given to determining the needs of the State in the areas of pharmacy and veterinary programs. The study should include an analysis of the State's responsibility for providing access to its citizens and the demand in Florida for program graduates using supply and demand information provided by the Department of Health Planning and Development. To maintain the plan up-to-date, the Commission shall also prepare a review of the status of all health professions education programs included in the plan and provide current information on enrollment and graduate levels, a review of market place demand for graduates, and an analysis of new policy issues and the disposition of former recommendations. The Commission shall provide reports to the Legislature on pharmacy and veterinary education no later than March 1, 1987 and the review of all health education plans no later than March 1, 1988."

Committee Activities

The Chairman of the Postsecondary Education Planning Commission appointed a committee of three Commission members to serve as the Comprehensive Health Professions Education Committee.

The Committee held meetings in July, October and December to receive public testimony and discuss issues and recommendations. Testimony has been received from the University of Florida College of Veterinary Medicine, the St. Petersburg Junior College Veterinary Technology program, the Board of Regents, the State Board of Community Colleges, the Institute of Food and Agricultural Sciences, the Florida Board of Veterinary Medicine, the American Veterinary Medical Association, the Association of American Veterinary Medical Colleges, and representatives of the animal producer groups in Florida. Additionally, the Committee reviewed national veterinary manpower studies, regional reports by the Southern Regional Education Board, and University of Florida veterinary manpower reports.

Veterinary Education Programs in Florida

The University of Florida College of Veterinary Medicine is one of twenty-seven veterinary colleges in the United States and is the only such college in Florida. The State's only public two-year program in Veterinary Technology is at St. Petersburg Junior College. The need for quality veterinary medical training in Florida has been heightened by the size and variety of food animal agriculture in the State and the growth of the horse breeding and racing industry and the greyhound racing industry. Additionally, the increasing numbers and variety of companion animals in Florida has created a demand for trained veterinary technicians.

Veterinary Manpower

The Commission reviewed national, regional, and State manpower reports and found a projected surplus of private veterinary practitioners both nationally and in Florida. Veterinary manpower in Florida, however, is affected by the large in-imigration of veterinarians and by the high demand for veterinary education by Florida residents. The University of Florida College currently accepts less than 20 percent of its applicants. The Commission concluded that the current enrollment levels should be maintained to ensure needed manpower and to provide access to the veterinary profession for Florida citizens.

1. The State of Florida should not increase the number of veterinary schools in light of the predicted surplus of veterinarians through the end of the century.

2. The current enrollment level at the University of Florida College of Veterinary Medicine should be maintained. The University of Florida College of Veterinary Medicine is sufficient to meet the State's needs for adequate veterinary manpower through the end of the century.

Veterinary Medical Education

Since the charter class was graduated in 1980, approximately 510 veterinarians have been graduated from the University of Florida College of Veterinary Medicine. The College operates a Veterinary Medical Teaching Hospital that includes food animal, equine, and small animal units. The patient case load in both the Equine Hospital and the Small Animal Hospital continues to increase, with referral cases demonstrating the greatest increase. These hospitals, however, are operating within severe space limitations.

The College is responding to State priorities by graduating an increasing number of students entering practice in areas of need: food animal practice and equine practice. To monitor these needs, the College should continue to advance its efforts to track its graduates and follow the type of animal practice in which they are employed. While small, the College has the second largest black student enrollment of U.S. Colleges, and the Commission supports the continued development by the College of initiatives designed to increase the number of black faculty members and improve the recruitment and retention of black students.

3. The Board of Regents should review the educational mission statement of the Veterinary Medical Teaching Hospital to ensure that caseload selection criteria supports an optimal variety of educational opportunities for veterinary students.

4. The Commission supports the Board of Regents Program Review recommendation that the College, the University of Florida and the Board of Regents take action to address space and resource shortages, particularly in the clinical and hospital facilities.

5. Because of the increasing number of students at the University of Florida selecting large animal practice, the Commission does not recommend any changes in current admission polices and selection criteria.

6. In order better to assess admission policies, curriculum and program effectiveness, and to ensure that the College of Veterinary Medicine is producing veterinarians that are trained to meet the manpower needs of Florida, (i.e. small animal, large animal or equine practitioners), the College should strengthen its efforts to track its graduates and record the type of animal practice in which they are employed.

7. The CHOICES system maintained by the Center for Career Development Services should include information about the University of Florida College of Veterinary Medicine Post-Baccalaureate Training Program.

8. Information about the University of Florida Veterinary Medicine program should be presented at the annual University of South Florida statewide graduate opportunities conference for minority students.

9. The Board of Regents should conduct an analysis of the usage of SUS grant-in-aid monies to assure that the needs of minority veterinary students are being met adequately.

Veterinary Technology Education

The St. Petersburg Junior College Veterinary Technology program provides two-year training that enables graduates to be employed as technicians under a practicing veterinarian. The program has graduated 365 technicians since its inception in 1971.

Testimony has been received on the increasing demand for trained technicians in Florida and the Commission has offered recommendations designed to increase the publicity and recruitment activities of the St. Petersburg program around the State. Additionally, the Commission supports the process developed by the State Board of Community Colleges for the designation of Centers of Excellence at the State level to evaluate the need for additional two-year programs in other regions of the State.

10. The Division of Vocational, Adult, and Community Education through its Center for Career Development Services should insure that the

St. Petersburg Junior College Veterinary Technology Program is included in the Florida CHOICES and Florida VIEW programs and in all published program inventories.

11. The St. Petersburg Junior College Veterinary Technology Program should enlist active involvement of veterinarians around the State and utilize the Florida Veterinary Medical Association to expand its statewide recruitment activities and more effectively disseminate information on the Program to high school counselors and students in all regions of the State.

12. The St. Petersburg Junior College Veterinary Technology program should pursue with the State Board of Community Colleges the designation as a Center of Excellence.

13. As the St. Petersburg Junior College Veterinary Technology program becomes more fully subscribed, the State Board of Community College should evaluate the need for additional two-year programs in other regions of the State. If additional centers are deemed necessary to meet the access needs and manpower needs of the State, consideration should be given to the populous region of southeast Florida and to the north central region that is close to the University of Florida College of Veterinary Medicine.

Graduates of Foreign Veterinary Schools

Testimony has been received in regard to the large number of veterinarians who are trained in foreign veterinary schools and who seek licensure by examination in Florida. The Florida Board allows foreign graduates of recognized veterinary schools, not necessarily accredited schools, to take the national examinations.

14. The Commission supports the efforts of the Department of Professional Regulation to modify the Florida licensure process in order to require all foreign veterinary school graduates to obtain the E.C.F.V.G. certificate in order to be eligible to sit for the licensure examination in Florida.

Conclusion

The citizens of the State of Florida are being well-served in regards to the quality of preparation for veterinarians in the State. The University of Florida College of Veterinary Medicine is one of twenty-seven veterinary colleges in the United States and is the only such college in Florida. Since 1980, when the first graduates began practice, the College has focused its curriculum and training on the development of professional practitioners to meet the animal health care needs of the citizens of the State. Additionally, the College has provided an active and diverse center of research to address the health and food production concerns of Florida's animal population.

The State's only public two-year program in Veterinary Technology is at St. Petersburg Junior College. The program has been highly successful in

providing technician training for the State and the employability of their graduates remains high. Additional need may be met through the State Board of Community Colleges process for designating State and regional centers of excellence. This process will allow the State to respond to existing and future needs for veterinary technicians in the State.

I. INTRODUCTION

Comprehensive Health Professions Education Plan

At the request of the 1982 Legislature, the Postsecondary Education Planning Commission developed an outline for a comprehensive health professions education plan for the State of Florida. Submitted to the Legislature in March 1983, the outline recommended that the Postsecondary Education Planning Commission undertake a series of reports in the different health professions education areas. Seventh in the series, this report on veterinary education follows reports on nursing, public health, dentistry, chiropractic, medical education, and allied health education.

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II. THE VETERINARY MEDICAL PROFESSION

A. Introduction

Veterinarians are primarily responsible for the health of farm livestock, poultry, and companion or pet animals. These animals are the major concern for most veterinarians in private practice as well as in governmental service. Because the United States is a meat-eating country, cattle, swine and sheep outnumber the human population. Additionally, there are more pets than families.

Approximately, 42,600 veterinarians are active in the United States which represents a 37 percent increase from the 31,000 veterinarians in 1975. Additionally, the supply of female veterinarians has increased at a faster rate than male veterinarians. Between 1977 and 1984, male veterinarians increased 20 percent (from 30,100 to 36,100), while female veterinarians increased 124 percent (from 2,900 to 6,500).

In 1984, 76 percent of the active veterinarians were primarily engaged in clinical practice, with most of the remainder in research, government, inspection, or military service. See Table 1. According to the American

TABLE 1

NUMBER AND PERCENT DISTRIBUTION OF U.S. ACTIVE VETERINARIANS, BY TYPE OF EMPLOYMENT, AND BY SEX: DECEMBER 31, 1984

Type of employment	All Active Veterinarians		Male		Female	
	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution
All active	42,600	100.0	36,100	100.0	6,500	100.0
Self-employed	20,400	47.9	18,900	52.2	1,500	23.8
Private practice employee	12,000	28.2	8,500	23.6	3,500	53.5
College or University	4,700	11.0	3,900	10.9	800	12.4
Industrial employee	1,100	2.6	1,000	2.8	100	1.3
Federal government (civilian)	1,400	3.3	1,300	3.7	100	1.8
Armed Forces	650	1.5	600	1.6	50	0.8
State or local government	750	1.8	700	2.0	50	0.8
Other	1,600	3.7	1,200	3.2	400	5.6

Source: Health Resources and Services Administration, Bureau of Health Professions, Division of Associated and Dental Health Professions.

Veterinary Medical Association, 75 percent of all active veterinarians were in large-animal practices, small-animal practices, or mixed-animal practices. Within these categories, 38 percent were in small-animal practices, 32 percent were in mixed-animal practices, and 4 percent were in large-animal practices.

In our increasingly complex society, veterinarians have become involved in public health work, such as inspection of production, storage, and distribution of animal food products; the health care of zoo animals; animals used for biological and medical research; and animals in wildlife. Virtually all medical research requires the use of animals. Veterinarians are also engaged in research related to animal disease, human medical concerns, and basic biological conditions, including research in the fields of ecology and oceanography.

B. History

Since the beginning of civilization, animals have played a significant role in the lives of the inhabitants. Concern for the well-being of animals has been documented in the records of numerous ancient cultures. The early societies of Korea, India and China, from 1500 B.C. to 500 A.D., regarded animals as kin to humans, treated them with respect, and had veterinary priests who treated injured or diseased animals. Punishments for cruelty to animals were severe and owners were required by law to account for all illnesses or deaths among their animals.

During the Roman Empire, the threat of plague created a need for veterinary medicine, but animals during this period suffered barbaric forms of treatment including the practice of "bleeding" to extract bad blood. The Roman Catholic Church was opposed to veterinary science because it recognized the biological connection between human beings and animals. The Church, thus, discouraged the growth and advances in methods of animal treatment.

The Renaissance Period in Europe brought a rebirth of scientific thinking and interest in veterinary science. Early in the Eighteenth Century, the outbreak of a plague in Europe heightened the need for well-trained veterinary practitioners. Losses of cattle, sheep, goats, and pigs were severe; as in France alone, half of the cattle population was destroyed by plague during the Eighteenth Century. As a result, by the end of the century, veterinary schools were opened in every country of Europe.

In early America, livestock raisers had no major diseases or epidemics as did European farmers during the same period. By the Nineteenth Century, infectious animal diseases began to be transmitted from the Old World. The growth of population and the improvement of transportation systems brought about a rise in demand for dairy and meat products but also increased the spread of disease across the country. By the 1850s, animal diseases including hog cholera, anthrax, pleuropneumonia, and tuberculosis, became rampant among American livestock. The livestock industry looked to the veterinary profession for relief from the devastating effects of these diseases. In addition, the rapid growth of agriculture and its importance to the U.S. economy led to an increased demand for veterinary services.

During this period, most of the early veterinarians were simply horse traders. Veterinary practice in the Eighteenth and early Nineteenth Centuries consisted of often brutal treatment of animals including "bleeding" and force-feeding toxic concoctions down animals. By 1847, there were only fifteen graduated veterinarians in America, all of whom had been trained in Europe. Historian Smithcors wrote in The American Veterinary Profession (1963) that not more than a century ago, the entire veterinary profession of the country could have assembled in one room.

In 1862, the U.S. Department of Agriculture was founded and a well-organized veterinary department was developed within it. In addition, the Morrill Land Grant College Act created funds from the sale of public land to be used for research and the establishment of agricultural schools. This Act linked veterinary medicine firmly to schools of agriculture. In 1863, the U.S. Veterinary Medical Association was founded which was the first such organization in the world. In 1884, Congress passed the Hatch Act which created the Bureau of Animal Industry (BAI) within the Department of Agriculture to attempt to prevent the importation of diseased animals into the United States and to suppress and exterminate diseases occurring among native livestock. Under the auspices of the BAI, many animal diseases were virtually eliminated, including Texas fever, pleuropneumonia, hog cholera, and foot-and-mouth disease. The Hatch Act of 1887 allocated federal funds to state agricultural colleges for research, including veterinary research, and the Meat Inspection Act of 1890 introduced restrictions aimed at making American meat safer to eat. Through these research activities, veterinarians discovered that insects were a source of transmitting diseases from animal to man and from man to animal.

In the Twentieth Century, the public became increasingly aware that the veterinary profession had become indispensable to the raising of healthy animals for meat. Veterinarians became recognized as an integral and essential part of the society as many of the major animal diseases were under control or eradicated. At the same time, interest in small animals increased, creating a demand for small animal practitioners and leading to the development of animal hospitals.

In addition to the treatment and prevention of animal diseases, veterinary science expanded to include medical research and the resultant responsibilities related to the treatment of human health. In an expanding role, veterinary researchers began to collaborate and share information with medical researchers in combatting diseases that are similar in animals and humans and diseases that are communicable between them.

Today, veterinarians working for federal, state and city governments are involved in public health, experimental medicine, space medicine, drug research, meat and poultry inspection, studies of food products, and research on zoonoses - the diseases that are transmitted from animals to human beings. Through veterinary research, human medicine continues to look to animal studies for guidance in new vaccines and surgical techniques and in handling disease problems in the human population.

C. Animal Disease Research

Farmers in the animal agricultural industry in the United States are more concerned than ever about the profitability of the business and they are striving for production efficiency. One of the major impediments to improved productivity is the continuing burden of animal disease which causes significant losses for the multibillion-dollar agricultural industry. Livestock and poultry losses from endemic diseases, parasites, pests, and biological and management inefficiencies have been estimated by the U.S.D.A. at $14 billion annually, or a 20 percent loss of farm income for the animal production industry.

Foot-and-mouth disease, perhaps the most serious disease of livestock, was first recognized in the United States in 1870, during the early years of focused animal disease research. It has been reported eight times since then, most recently in 1929, and was eradicated after each outbreak. Other biomedical advances in veterinary medicine include the control of brucellosis and bovine tuberculosis and the eradication of hog cholera. The study of bovine tuberculosis contributed to the understanding of human disease, including gastrointestinal tuberculosis and its complications. In 1917, when a nationwide federal-state campaign of eradication began, one cow in 20 had the disease. The disease among cattle has now been virtually eliminated.

Investigations on avian tumors have played an important role in cancer-virus research, and the development of a hog cholera antiserum became a forerunner of serum-virus immunization. Although the disease has now disappeared, before an eradication program began in 1962, hog cholera cost the swine industry $50 million a year.

Comparative medicine became an important field of study soon after World War II. In 1954, the USDA Animal Disease Center was established for the study of exotic diseases of animals. The greatest achievement of this facility has been a foot-and-mouth disease vaccine produced through genetic engineering - the first effective vaccine against animal and human diseases prepared with gene-splicing techniques. The National Animal Disease Center was established in 1956. The Center is devoted to the study of approximately 30 diseases of major economic importance affecting domestic animals. New and valuable animal models of both naturally occurring and induced diseases are being recognized continually.

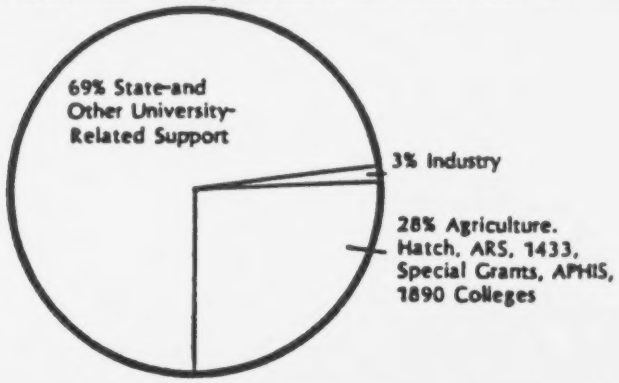
The increased use of animals for research resulted in the establishment of a number of organizations concerned with animal care. In response to an increasing need, the American Association for the Accreditation of Laboratory Animal Care (AAALAC) was founded in 1965. The accreditation process assures the public that institutions maintain high standards of animal care.

The total research capacity for food-animal health research in universities is derived from a number of different sources. See Figure 1. The largest contribution (69%) is the universities, which derive most of their funds from their states. The Department of Agriculture contributes 27.5 percent of the support through Hatch funds (6.5%), USDA/ARS (6%), Animal Health and Disease Research Programs (6%), and Special Grants (6.5%). Industry contributes about three percent (3%) of the total dollars for animal health research. The

states with colleges of veterinary medicine are carrying the largest share of funding support for animal health research for the nation.

Figure 1

Proportionate Funding for Food Animal Health Research in Universities.


69% State-and Other University-Related Support
3% Industry
28% Agriculture. Hatch, ARS, 1433, Special Grants, APHIS, 1890 Colleges

Source: Specialized Veterinary Manpower Needs Through 1990, National Research Council

D. Careers in Veterinary Medicine

The veterinarian's background and experience prior to veterinary college, the interest developed in professional school, and the geographic location chosen for practice often direct the practitioner's efforts toward acquiring skill in the care of one particular species of animal or to gain special knowledge regarding a certain group of related diseases. Table 2 shows types of employment and starting salaries for 1985 U.S. veterinary medicine college graduates. The data show that 35.6 percent entered small animal exclusive practice at an average annual salary of $21,427, up 3.8 percent from 1984. In the academic sector, 1.4 percent took university positions at an average salary of $14,171 and 12.8 percent began advanced study at an average salary of $14,199. Additionally, one half of the graduates who reported starting salaries indicated they would receive additional compensation within the first year that would range from $2,000 to $5,000.

Private Practice. Private practice attracts the largest percentage of veterinarians. Large-animal practice is concerned with nutrition, management, and disease problems of horses, cattle, sheep, and swine, and works to assure an adequate animal protein supply by protecting food animals from disease. Small-animal veterinarians are concerned with the health care and management of dogs, cats and other small pets. A mixed practice is often staffed by more than one veterinarian to offer services to both large and small animals. Specialty practices include concentration on a particular animal or discipline. Laboratory-animal veterinarians manage laboratory animals used for biomedical teaching and research. Space and marine biological

TABLE 2

TYPES OF EMPLOYMENT AND STARTING INCOMES
OF A LARGE SAMPLE OF 1985 US VETERINARY MEDICAL COLLEGE GRADUATES

	Percentage of graduates	Average starting salary (No.)	Average additional compensation expected in 1st year (No.)
Large animal exclusive	1.0	$20,857(7)	$2,416(6)
Large animal predominant	8.7	20,640(68)	2,205(38)
Mixed animal	14.8	20,036(106)	2,108(58)
Small animal predominant	12.0	20,981(91)	2,434(55)
Small animal exclusive	35.6	21,427(30)	2,596(149)
Equine predominant	4.2	20,710(30)	4,768(11)
University	1.4	14,171(7)	--- ---
Federal government	0.2	22,000(2)*	--- ---
Military service	1.5	26,560(10)+	3,333(3)
State/local government	0.2	20,000(1)	--- ---
Industry/commercial	0.2	29,500(2)	--- ---
Not-for-profit organization	0.1	--- ---	--- ---
Advanced study	12.8	14,199(87)	2,820(15)
Self-employed	6.4	21,016(30)	5,000(10)
Other	0.8	20,684(7)	3,250(3)
	100	$20,164(710)++	$2,602(348)

*Starting salary for federal government employment for veterinarians with no experience, no advanced degree other than the DVM, and not in the top 25 of their graduating class was $21,804 (GS 9, step1). +Starting salary for military employment for veterinarians who are single, with no prior military service; the salary was $25,460, that includes base pay, subsistence and quarters allowance; veterinary special pay. ++Of the 881 graduates reporting employment, 710 reported their starting salary for full-time employment.

Source: JAVMA, (1986). Vol. 188, No. 2.

veterinarians will become increasingly important with the expansion of space travel and the use of marine plants and animals for food sources.

During the past fifteen years, there has been a marked and steady increase in the breeding, management and training of horses for both business and pleasure purposes. Due to the value of these animals and the particular functions assigned to them, owners select veterinarians who have specific skill and knowledge about these particular animals. Horses are prone to breeding problems and digestive disorders not commonly seen in most species. In race horses, injuries to the legs can produce very serious effects on the primary function and usefulness of the animal. In 1985, 4.2 percent of veterinary school graduates specialized in equine practice.

Many equine practitioners work on a contract basis serving a particular stud farm. Other veterinarians are directly employed by race track or racing commission officials to enforce regulations that govern horse racing. They are primarily responsible for certifying the condition of health of the race entries and oversee all activities that may affect the health of the animals.

Federal Employment. The largest single employer of veterinarians is the U.S. Federal Government. The largest department is the U.S. Department of Agriculture which employs veterinarians in meat inspection, animal disease eradication programs, animal disease and parasite research, and inspection of poultry, livestock, and biological production plants. The Department administers a national program designed to control animal diseases and to prevent the production, importation, and marketing of harmful products for use in the treatment of domestic animals. A large function of the department is to provide inspection of meat and meat food products and poultry and poultry food products.

State Employment. Each state has a chief livestock sanitary officer whose duty is to enforce the laws, rules and regulations formulated to suppress diseases of animals within the state and to control the movement of animals through the state. Many state health departments have one or more veterinarians on their staff for the control of animal diseases and disease transmissible to humans, for research, and for food inspection activities.

International Agencies. Veterinarians are employed in foreign service through universities, foundations, specialized agencies of the United Nations, or by direct employment by foreign countries.

Private Industry. Many biological and pharmaceutical companies, feed manufacturers, distributors, and dealers, and meat-packing companies employ veterinarians on their staffs.

Academic Positions. Agricultural schools and colleges of veterinary medicine employ veterinarians in research, teaching, adult education, and other forms of service.

Military Service. The Army and Air Force have a contingent of veterinary officers to protect the health of their troops and carry out research in special military fields. In 1916, the National Defense Act established the Veterinary Corps for the inspection of food supplies and for medical care of

animals. During World War II, the Corps was comprised of 2,200 officers and 500 enlisted men and was responsible for meat and dairy inspection, animal medical care, insect and rodent control and the operation of veterinary laboratories. Today, military veterinarians work with other scientists in all research projects dealing with food and animals and are responsible for the care of military animals.

E. Licensure

In 1950, a National Board of Veterinary Medical Examiners was established to provide a comprehensive examination acceptable to all State Veterinary Medical Examining Boards. The examinations generally grant practice privilege for the state in which the examination is conducted. State Boards operate under the veterinary practice acts that establish the time and place of the examination, the academic and character qualifications of the candidate, the nature of the examination material, and fees to be charged for examination and annual licensure. There is very little reciprocity in veterinary medical licensure among states.

Since 1925, the State of Florida regulations for the practice of veterinary medicine have provided for the licensure and regulation of persons wishing to practice in the State. The Board of Veterinary Medicine within the State Department of Professional Regulation carries out the provisions of the Veterinary Medicine Practice Statute. The seven-member board is composed of five licensed veterinarians and two lay persons. Table 3 shows, by county, the number of licensed veterinarians in Florida.

There is wide variation in the training and competency of veterinarians educated in other countries. This has led to many problems for licensing boards and state legislative bodies as many graduates of foreign veterinary colleges attempt to obtain licenses in the United States. The AVMA foreign graduate certification program was developed to assist state licensing boards to identify veterinarians who have received training comparable to that offered in colleges approved or accredited by AVMA. The AVMA program is administered through the Educational Commission for Foreign Veterinary Graduates (ECFVG).

A veterinarian who wishes to obtain an ECFVG certificate must fulfill four basic components: 1) be a graduate from an AVMA recognized veterinary college, 2) prove fluency in English, 3) pass the National Board Examination in Veterinary Medicine (NBE) and the Clinical Competency Test (CCT), and 4) pass a Clinical Evaluation Examination (CEE) or complete a year of evaluated clinical practice. Between 1973 and 1984, slightly more than one-third (571) of the graduates of foreign veterinary schools who registered for the ECFVG examination successfully completed the examination.

The District of Columbia and 41 state licensing boards require, while another five licensing boards accept, the ECFVG certificate in lieu of graduation from an AVMA accredited or approved college of veterinary medicine. Five states have structured their own programs and may use some aspect of the ECFVG program in determining a candidate's eligibility to sit for licensing examinations.

TABLE 3

Veterinarians: Licensed Doctors of Veterinary Medicine in the State and Counties of Florida
March 1985

LOCATION OF LICENSEE	DOCTORS OF VETERINARY MEDICINE	LOCATION OF LICENSEE	DOCTORS OF VETERINARY MEDICINE
Total 1/	3,461	Jefferson	4
Non Florida	1,588	Lafayette	1
Unknown	0	Lake	21
Alachua	121	Lee	46
Baker	0	Leon	33
Bay	17	Levy	4
Bradford	2	Liberty	0
Brevard	47	Madison	2
Broward	177	Manatee	24
Calhoun	2	Marion	72
Charlotte	14	Martin	19
Citrus	13	Monroe	19
Clay	12	Nassau	1
Collier	21	Okaloosa	22
Columbia	5	Okeechobee	6
Dade	255	Orange	76
De Soto	7	Osceola	13
Dixie	1	Palm Beach	121
Duval	84	Pasco	26
Escambia	33	Pinellas	120
Flagler	2	Polk	52
Franklin	2	Putnam	4
Gadsden	5	St. Johns	12
Gilchrist	2	St. Lucie	12
Glades	0	Santa Rosa	7
Gulf	0	Sarasota	52
Hamilton	0	Seminole	33
Hardee	4	Sumter	11
Hendry	5	Suwannee	3
Hernando	9	Taylor	5
Highlands	9	Union	1
Hillsborough	125	Volusia	46
Holmes	1	Wakulla	2
Indian River	13	Walton	2
Jackson	6	Washington	7

1/ Total includes all licensed persons regardless of current status.

SOURCE: Florida Statistical Abstract, 1985.

Florida, Connecticut, New York, and California do not require EGFVG certificates for licensure.

F. Salaries

The average starting salary of U.S. veterinary medical college graduates has increased 32.3 percent from $15,241 in 1978 to $20,164 in 1985. See Table 4. Analysis by type of employer showed that the average starting salary in private practice increased 32.8 percent from $15,776 in 1978 to $20,956 in 1985. When adjusted for the increased cost of living, the average graduates' starting salary, in real terms, declined from $23,269 in 1978 to $18,688 in 1985, a decrease in purchasing power of 19.7 percent over the 7-year period.

TABLE 4

Real Starting Salaries of US Veterinary Graduates
1978-85

Money Income

Year	Private Practice	Nonprivate Practice	Advance Study	All Graduates
1978	$15,776	$15,176	$11,133	$15,241
1979	16,528	16,054	11,389	15,949
1980	18,552	17,967	12,033	17,175
1981	18,832	18,059	12,937	18,314
1982	19,351	20,864	13,781	18,700
1983	19,872	22,865	13,541	19,194
1984	20,237	21,493	13,797	19,527
1985	20,956	21,814	14,199	20,164

Real Income (1983 dollars)

Year	Private Practice	Nonprivate Practice	Advanced Study	All Graduates
1978	$24,085	$23,169	$16,997	$23,269
1979	22,672	22,022	15,623	21,878
1980	22,433	21,725	14,550	20,768
1981	20,626	19,780	14,170	20,059
1982	19,970	21,531	14,222	19,298
1983	19,872	22,865	13,541	19,194
1984	19,403	20,607	13,228	18,722
1985	19,421	20,217	13,159	18,688*

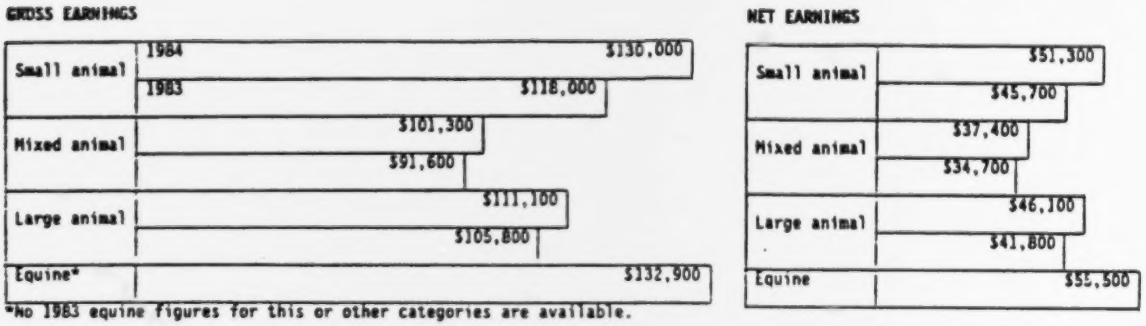
*Based on projected 3.6% increase in cost of living for 1985.

SOURCE: JAVMA, (1986). Vol. 188, No. 4.

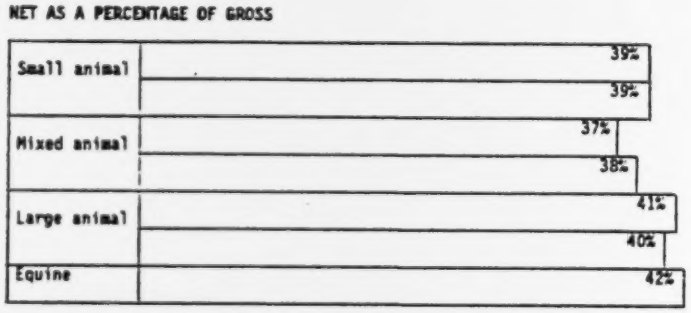
A 1985 Survey of established veterinary practitioners showed a continuing increase in earnings in 1984. See Table 5. The average net income in 1984 was $48,600 which was a 13.3 percent increase from 1983. Net earnings showed one year increases of 12 percent for small animal practitioners, 8 percent for mixed animal practitioners and 10 percent for large animal practitioners.

TABLE 5

VETERINARY PRACTITIONERS EARNINGS BY TYPE OF PRACTICE



*No 1983 equine figures for this or other categories are available.



All figures are means for individual doctors within each practice emphasis. Net figures are before income taxes. Figures are calculated only for doctors in practice one year or more and having some 1984 expense in the category indicated. All 1983 financial figures are revised.

Source: Veterinary Economics, October 1985.

The average profit margin for veterinary practitioners in 1984 was 40 percent. The majority of practitioners, 64.9 percent, earned $30,000 to $99,999 net income in 1984. Practitioners in the South gained 19.2 percent on their 1983 net incomes during 1984. Table 6 shows that the South-Atlantic region produced a net income of $54,200.

TABLE 6

1984 INCOME BY U.S. REGION

	Gross	Net
Northeast	$136,000	$56,200
South-Atlantic	138,500	54,200
Mid-South	99,000	48,900
Great Lakes	118,500	47,900
West	128,000	47,500
Southwest	126,200	46,600
Plains State	105,100	41,500

Source: Veterinary Economics, October 1985

G. Current and Future Trends in Veterinary Medicine

When the veterinary profession first developed in America, practitioners were trained to diagnose and treat ailments of the horse. The work gradually expanded to include the care of all farm animals, and as urban conditions improved, the veterinarian became responsible for the health of pet animals.

With the increases in human population and the demand for meat, milk and other animal-source foods for human consumption, larger and more efficient, specialized livestock units have developed. The changing agriculture economy has forced the farmer to consolidate, and this consolidation of animals has caused greater need for veterinarian training in disease prevention, herd management and economics. Livestock and agriculture production now require added efficiency to balance the narrow margin of profit. Veterinarians are now involved in a variety of economic factors that relate to total productive efficiency. Veterinary medical services have broadened in scope so that they now encompass such disciplines as space medicine, radiobiology, laboratory animal medicine, bioengineering and many other fields that have arisen out of new technologies. As emphasis on scientific agriculture and on local, national, and international health programs continue, expansion in veterinarian research will continue. The globalization of the world's societies has increased the involvement of veterinarians in combatting food shortages in underdeveloped nations and in researching diseases that are exotic and that are transmissible from animals to man.

In the future, employment opportunities for veterinarians in federal agencies will increase to meet additional consumer requirements for high-quality food products and to control and eradicate diseases of economic importance to the livestock and poultry industries and of concern to human health. In this regard, medical schools, research institutes and industry will require additional laboratory animal specialists. Industrial development in the production, sales, and research of drugs, chemicals, antibiotics, and other therapeutic and diagnostic agents will remain high. Veterinarians trained in

virology, bacteriology, biochemistry, parasitology and pathology will be in demand by their organizations.

The ever-expanding technology of veterinary science and practice has heightened the trend for more specialized training on a postgraduate level in the form of internships, residencies, speciality training and graduate instruction leading to an advanced degree. Postgraduate studies and continuing education will be necessary to prepare veterinarians for research into the complexities facing agricultural and medical sciences. Cooperative research with medical schools and agricultural research institutes will continue to broaden and more veterinarians will be attracted to these opportunities. Graduate training to obtain additional certification for specific clinical areas is increasingly being offered through veterinary schools. In addition to private practice, veterinary schools are now focusing their training to prepare for careers in research, commercial activities, laboratory animal care, armed forces, teaching and government service.

III. THE NEED FOR VETERINARY CARE: FOOD ANIMAL AND EQUINE POPULATION TRENDS IN FLORIDA

In the United States, animal agriculture is an integral component of the economy generating about fifty percent of the country's total gross farm income. The U.S.D.A. estimated that in 1983, farm assets in livestock were $49.8 billion and foreign trade in animals and animal products amounted to $3.7 billion, eleven percent of the total agricultural exports. See Table 7. Additionally, seventy percent of the total U.S. agricultural area is rangeland, grazing area, permanent pasture, or hayland. Many products from these types of lands must be "cycled" through animals before they are consumed by humans.

TABLE 7

U.S. LIVESTOCK INVENTORIES FOR 1983 OR 1984

Livestock	Number	Value[a] ($,thousands)
Cattle and calves (1984)	114,040,000	45,119,309
Hogs and pigs (1983)	55,819,000	3,288,826
Sheep and lambs (1984)	11,411,000	594,457
Chickens, nonbroilers (1983)	364,584,000	716,192
Chickens, broilers (1983)	4,183,660,000	
Turkeys (1983)	169,768,000	
Horses (1984)	8,463,000[b]	
Milk cows and heifers, calves and replacements (1984)	15,681,000	

[a]Value equals the number of livestock times the price per head.

[b]National Horse Council estimate.

Source: USDA

The food animals having the greatest impact on Florida's economy are beef and dairy cattle, poultry, and swine. Table 8 shows the value of these commodities to the economy of the State during 1984.

TABLE 8

FLORIDA COMMODITIES RANKED BY VALUE OF CASH
Farm Receipts, 1984
(value in thousand dollars)

Rank	Commodity	($1,000.)
1	Oranges	825,014
2	**CATTLE/CALVES**	**373,133**
3	Tomatoes	367,955
4	Sugarcane	332,101
5	**DAIRY PRODUCTS**	**304,398**
6	Foliage Plants	269,202
7	Grapefruit	196,802
8	**EGGS**	**155,093**
9	**BROILERS**	**126,149**
10	**OTHER LIVESTOCK**	**104,741**
26	**HOGS**	**27,088**

Source: I.F.A.S., U.F.

The number of beef cattle and calves in Florida declined from 2,254,000 in 1981 to 1,922,000 in 1985; a 14.7 percent decrease. Nationally, during the same period, the number of beef cattle declined by 9.1 percent, and in the composite south/midatlantic region by 6.7 percent. Overall, the trend reflects declining beef prices and the changing dietary habits of Americans. In Florida, the industry problems generated by a changing market were exacerbated by severe weather conditions in the early years of the decade, which forced many ranchers to liquidate. Southward expansion of citrus groves into traditional ranching regions of the state, urban encroachment, and the relatively high costs of transporting Florida cattle to major out-of-state markets have also had a negative impact on the size of the State's herds. Expansion of the industry in the near future is not anticipated.

The number of dairy cows appears to have stabilized at around 200,000 head. Existing herds produce about 93 percent of the State's milk requirements. Given the national pattern of overproduction of dairy products and the increasing competition from out-of-state producers of processed products and dairy substitutes, an increase in the number of dairy cattle is not expected.

Florida ranks approximately ninth in the nation in egg production and thirteenth in broiler production. Historically, 30 percent of the State's egg production has been shipped to northern markets. Increased transportation costs, both of eggs leaving the state and of feed shipped to the State from the midwest, however, are predicted to limit growth to that necessary to supply the state's population growth. Broiler production at present supplies

only 50 percent of the State's needs. Further industry growth, however, is highly dependent upon the future availability of expansion capital at acceptable interest rates.

In swine production, Florida has fallen from 25th in the nation in 1981 to 29th in 1984. Gross income during the same period fell from 57 to 28 million dollars. These figures reflect a 37 percent reduction in hog numbers, a 51 percent reduction in gross income and a 55 percent decline in the number of producers. Nationally, the swine industry suffered an 8 percent reduction in number of animals and a 2 percent decline in gross income. An early return to 1981 levels is not foreseen.

With the possible exception of the broiler segment of the poultry industry, there appears to be little to suggest that Florida will experience significant increases in the number of food animals in the foreseeable future.

Additionally, nonfood animals have a significant influence on the State's economy. The horse racing and breeding industry in Florida has produced over a $1 billion impact on the State's economy. In a major study of "The Economic Contribution of the Thoroughbred, Quarter-horse and Harness Horse Industries To the State of Florida," the 1980 Killingsworth Report provided a detailed study of the economic impact of these industries. The study commissioned by the Florida Thoroughbred Breeders Association, found that the horse industry in Florida generated a direct cash flow of $220 million to the State's economy. This cash flow provided approximately $80 million in direct salaries and wages to industry employees, $110 million in purchases from other industries, and $33 million to government. The salaries and wages of the industry employees were used to purchase housing, food, and clothing and thus provided income and employment to subsequent industries. The $110 million in purchases from other industries enabled those industries, in turn, to pay salaries and wages, taxes, and to buy necessary materials from yet other industries. The report concluded that, in this manner, the $220 million direct cash payments flowed through the Florida economy providing multiple levels of employment, investment, and taxes, thus providing an overall economic contribution approaching $900 million.

Florida's thoroughbred horse industry is the nation's third largest, exceeded only by Kentucky and California. Between 1980 and 1985 the number of thoroughbreds on Florida pasturage increased 43 percent. Most of the growth, however, occurred between 1980 and 1982, and leveled off to a 3 percent average annual increase from 1982 to the present. The total horse population (thoroughbreds and all other breeds combined) showed an overall 11 percent increase over the same period. The Florida Institute of Food and Agricultural Sciences reports that increased efforts to solve equine health-related problems are required if the industry's growth is to be sustained.

It is estimated that the greyhound racing industry has over a $1 billion impact on Florida's economy through tax income, payrolls, facilities, and animal care, food expenses and supplies. Eighteen of forty-six greyhound racing tracks in the United States are located in Florida. The tracks provide 2,700 programs of racing each year in which greyhounds from all over the U.S. and many foreign counties compete. Florida's 30,000 greyhounds represent one-fourth of the currently registered greyhounds in the U.S. In 1984, there

were 8,900,000 paid admissions to the tracks. The pari-mutuel system handled $960 million or $106.00 per citizen, which generated $77 million or 1.6 percent of Florida's total tax income. In 1984, greyhound racing resulted in $119 million or 60 percent of the wagering dollars in the State.

IV. VETERINARY MEDICAL EDUCATION

A. History

The first veterinary school was founded in France in 1761 in order to study the anatomy and diseases of horses, cattle and sheep. With the establishment of additional veterinary schools in France and the British Isles, veterinary medicine gradually became an accepted science. The period marked the beginning of the end of the early brutal practices in the treatment of animals. The efforts of the Nineteenth Century veterinarians were primarily in the field of large animal medicine and surgery. Formal study as a prerequisite for the practice of veterinary medicine became a necessity, and graduates of the veterinary schools developed a much sounder knowledge of animals, diseases, sanitation, anatomy and surgical techniques.

Matriculation requirements in the early schools were very flexible. A grade school diploma was supposed to be required for admission, but maturity and practical experience were usually accepted in lieu of formal scholastic requirements. Up until the Twentieth Century, it was felt that two or three years in a veterinary school were sufficient to acquire the knowledge and skills to serve the needs of the livestock industry.

Although professorships of veterinary medicine were being established in many universities in the United States, Iowa State College was the first to establish a state supported veterinary college in 1879. Between the years of 1880 and 1900, the number of veterinary schools increased from three to twenty-five, although only five of these original schools are still in existence. The majority of these schools were proprietary and due to their desire to produce as many graduates as possible, the standards and curriculum were often inadequate. Due to their instability, during the period between 1852 and 1948, thirty-four of the veterinary schools established in the United States and Canada were closed down.

The emerging leaders of the profession recognized the need for increased knowledge of veterinary medicine, improved facilities and improved methods of teaching. The increased recognition of the need for original research to go hand in hand with teaching and practice heightened the decline of private schools, as fees could not be raised to a sufficient level to maintain both teaching and research programs. The private schools found it increasingly difficult to compete with tax-supported schools and by 1927 all but one, the University of Pennsylvania, had discontinued operation.

In the late Nineteenth Century, agricultural colleges began playing an important role in the teaching of veterinary science, as over one-half of the schools employed professors of veterinary science. Attempts were made during the first decade of the Twentieth Century to increase entrance requirements, graduation requirements, and licensing requirements by examination boards, and, in general, to standardize educational requirements.

The period following World War II saw a rebirth of the veterinary profession in the areas of both education and research. During the onset of World War II, research in animal diseases turned to preventive medicine and food hygiene. Following the war, the demand for veterinarians and veterinarian

training continued to the point that between 1945 and 1948, seven veterinary schools were founded. The number of United States veterinary medical colleges increased from 18 schools in 1970 to 25 schools in 1984.

There are currently twenty-seven veterinary colleges in the United States. See Table 9. Colleges of veterinary medicine are located primarily in the Southern (11 schools) and Midwest states (9 schools). There are four schools in the West and three in the Northeast. Five schools accounted for more than 31 percent of all graduates in 1984 -- California, Colorado State, Iowa State, Ohio State, and Texas A & M University.

All veterinary colleges in the United States have met the standards established by the Council of Education of the AVMA. Through this association, professional standards of admission, curriculum, teaching methods, research facilities, and libraries are maintained.

B. Accreditation

The American Veterinary Medical Association's ten member Council on Education sets standards and determines accreditation for U.S. veterinary colleges. The following accreditation standards exist for every veterinary school: be part of an accredited postsecondary institution; have the same recognition and autonomy as other professional schools; have a dean who is a veterinarian; be adequately financed; have entrance requirements that include at least two years of pre-veterinary education in an accredited college or university; have a properly equipped animal hospital; and have specific curriculum standards and faculty qualifications. Professional standards include a code of ethics for practitioners.

The University of Florida College of Veterinary Medicine has received full accreditation from the Council on Education and the American Veterinary Medical Association. The Veterinary Medical Teaching Hospital is an approved Member Hospital and is fully accredited by the American Animal Hospital Association.

TABLE 9

Colleges of Veterinary Medicine of the United States

Institution	School Name	Year Established	# of Graduates as of 1985	1985-86 Total Enrollment
Auburn University	College of Veterinary Medicine	1907	3,955	359
University of California	School of Veterinary Medicine	1948	2,452	489
Colorado State University	College of Veterinary Medicine and Biomedical Sciences	1907	3,682	528
Cornell University	New York State College of Veterinary Medicine	1896	3,603	320
UNIVERSITY OF FLORIDA	COLLEGE OF VETERINARY MEDICINE	1971	510	316
University of Georgia	College of Veterinary Medicine	1947	2,354	332
University of Illinois	College of Veterinary Medicine	1944	1,886	299
Iowa State University	College of Veterinary Medicine	1879	4,242	465
Kansas State University	College of Veterinary Medicine	1919	4,012	406
Louisiana State University	School of Veterinary Medicine	1968	591	312
Michigan State University	College of Veterinary Medicine	1910	3,852	400
University of Minnesota	College of Veterinary Medicine	1947	N/A	308
Mississippi State University	College of Veterinary Medicine	1974	N/A	114
University of Missouri	College of Veterinary Medicine	1946	1,648	303
North Carolina State University	School of Veterinary Medicine	1979	N/A	255

TABLE 9 (cont.)

Ohio State University	College of Veterinary Medicine	1885	4,326	513
Oklahoma State University	College of Veterinary Medicine	1947	1,593	273
Oregon State University	College of Veterinary Medicine	1975	N/A	74
University of Pennsylvania	School of Veterinary Medicine	1883	3,636	438
Purdue University	School of Veterinary Medicine	1957	1,381	247
University of Tennessee	College of Veterinary Medicine	1974	418	172
Texas A & M University	College of Veterinary Medicine	1916	4,167	544
Tufts University	School of Veterinary Medicine	1978	N/A	252
Tuskegee University	School of Veterinary Medicine	1945	857	234
Virginia Tech and University of Maryland	Virginia-Maryland Regional College of Veterinary Medicine	1974	N/A	318
Washington State University	College of Veterinary Medicine	1899	2,362	358
University of Wisconsin-Madison	School of Veterinary Medicine	1979	N/A	234
			TOTAL ENROLLMENT 1985	8,863

Source: AVMA, 1986

C. Enrollment

In the last twenty years, the number of veterinary schools, student enrollment, and number of graduates has increased steadily. See Table 10.

TABLE 10

NUMBER OF SCHOOLS OF VETERINARY MEDICINE, ENROLLMENT, AND GRADUATES

Academic Year	Number of Schools	Number of Students		Number of Graduates
		Total	First Year	
1964-65	18	3,864	1,139	815
1969-70	18	4,876	1,339	1,165
1974-75	19	6,005	1,669	1,408
1979-80	23	7,803	2,247	1,845
1984-85	27	8,843	2,329	2,138

Source: Fifth Report on the Status of Health Personnel in the U.S. U.S. Department of Health and Human Services, 1986.

Nationally, there is a higher demand by students for entrance into veterinary medical schools than for either human medicine or dental medicine schools. Table 11 contains the number of applicants received and the number of applicants accepted by each of the veterinary colleges for 1984-85. The table shows that there were seven colleges, including the University of Florida, with less than 20 percent of the applicants accepted.

TABLE 11

Percentage of Applications Accepted in 1984-85
by U.S. Colleges of Veterinary Medicine

Veterinary college	No. of applications	No. accepted	Percentage accepted
Auburn	316	92	29.11
California	401	123	30.67
Colorado State	369	140	37.94
Cornell	490	80	16.33
FLORIDA	**414**	**80**	**19.32**
Georgia	152	87	57.24
Illinois	282	81	28.72
Iowa State	153	122	79.74
Kansas State	147	105	71.43
Louisiana State	167	80	47.90
Michigan State	238	100	42.02
Minnesota	265	80	30.19
Mississippi State	87	40	45.98
Missouri	218	76	34.86
North Carolina State	152	72	47.37
Ohio State	430	136	31.63
Oklahoma State	98	73	74.49
Oregon State	182	36	19.78
Pennsylvania	626	109	17.41
Purdue	572	60	10.49
Tennessee	397	60	15.11
Texas A & M	309	139	44.98
Tufts	358	67	18.72
Tuskegee	293	60	20.48
Virginia-Maryland	230	80	34.78
Washington State	259	71	27.41
Wisconsin	348	80	22.99
Total	7,953	2,329	

Source: JAVMA, Vol. 189, No. 1, July 1, 1986

The 1986 entering classes of the 27 veterinary colleges shows 13 fewer students than started in 1981. See Table 12. More importantly, this overall reduction also takes into account the 126 students added by Mississippi State, North Carolina, and Wisconsin during the six-year period of study.

TABLE 12

U.S. VETERINARY COLLEGES
FIRST-YEAR ENROLLMENTS

College	1986	1985	1984	1983	1982	1981	Gain/loss 1981-1986
Auburn	90	90	92	93	100	115	-25
California	122	122	123	122	123	129	- 7
Colorado	122	125	140	140	140	139	-17
Cornell	80	80	80	80	79	80	0
Florida	**80**	**80**	**80**	**80**	**80**	**80**	**0**
Georgia	86	86	87	87	86	86	0
Illinois	80	80	81	82	81	84	- 4
Iowa	120	120	122	126	121	122	- 2
Kansas	95	95	105	105	105	105	-10
Louisiana	80	80	80	80	80	80	0
Michigan	100	100	100	100	100	100	0
Minnesota	72	80	80	80	80	80	- 8
Mississippi	45	30	40	30	29	31	+14
Missouri	76	76	76	76	76	76	0
N.Carolina	72	72	72	72	40	40	+32
Ohio	130	130	136	130	132	141	-11
Oklahoma	70	70	73	70	70	70	0
Oregon	36	36	36	36	36	36	0
Pennsylvania	109	109	109	113	111	112	- 3
Purdue	60	60	60	60	72	72	-12
Tennessee	60	60	60	60	60	60	0
Texas A&M	128	138	139	138	139	138	-10
Tufts	65	65	67	68	65	59	+ 6
Tuskegee	60	60	60	63	61	60	0
Virginia	80	80	80	80	80	74	+ 6
Washington	64	70	71	70	70	106	-42
Wisconsin	80	80	80	80	0	0	+80
Total	2262	2274	2329	2321	2216	2275	-13

Source: Veterinary Economics, March 1986.

In 1970, fewer than one in ten veterinary students were women. Female students now outnumber male students as there are 4,506 females (50.8%) and 4,357 males (49.2%). This trend is likewise revealed in statistics for first-year enrollments of veterinary colleges during the past fifteen years. See Table 13.

TABLE 13

FIRST YEAR ENROLLMENT IN U.S. COLLEGES OF VETERINARY MEDICINE
BY SEX: FOR SELECTED YEARS

Academic Year	Total	Male		Female	
		Number	Percentage	Number	Percentage
1969-70	1,341	1,195	89.1	146	10.9
1974-75	1,669	1,262	75.6	407	24.4
1979-80	2,255	1,343	59.6	912	40.4
1984-85	2,329	1,153	49.5	1,176	50.5

Source: Association of American Veterinary Medical Colleges

D. Tuition and Fees

Table 14 represents a comparison of annual student tuition and fee charges for students in U.S Colleges of Veterinary Medicine. The University of Pennsylvania is the only private institution. Of the twenty-seven colleges, there are fifteen schools with higher tuition charges than the University of Florida. Historically, tuition for C.V.M. in-state students has been approximately 40 percent of out-of-state student tuition charges.

E. Curriculum

The curriculum is similar at each veterinary college and each college terminates with the conferring of a DVM degree. In general, the professional curriculum includes two years of the basic medical sciences, such as bacteriology, histology, biochemistry, anatomy, physiology, and pathology, followed by two years of clinical veterinary medicine, surgery, and other supplemental courses. Third and fourth year students begin to handle animals under supervision, assisting in diagnosis, treatment, surgery, and in laboratory techniques. While the student of human medicine must be acquainted with only one species, the veterinary student must learn all of the characteristics of many species. Veterinary colleges maintain both large and small animal clinics catering to local livestock and pet owners. Practicing veterinarians often refer cases to these clinics for observation and study. In addition, senior students spend time in ambulatory clinics making farm calls under graduate veterinarian supervision. Third and fourth year students also study radiology, veterinary law and ethics, food hygiene, public health, epidemiology, and obstetrics and gynecology. Most colleges offer organized internship programs that enable students to gain valuable experience under field conditions.

TABLE 14

COSTS OF VETERINARY MEDICAL EDUCATION
TOTAL YEARLY FEES, INCLUDING TUITION

School	DMV CANDIDATES		GRADUATE STUDENTS	
	Resident	Non-Resident	Resident	Non-Resident
University of Pennsylvania	10220	12150	0	0
Tufts	5910-10140***	19990+	0	0
Cornell	7400	8820	7400	7400
University of Wisconsin	6000	8200	3953	7221
Tuskegee	4550	4550	3900	3900
Virginia Tech	4395	0	2331	2574
University of Minnesota	4300	8600**	0	0
Michigan State	4071	8208	2302	4642
Colorado State	3814	18034**	1756	4889
Washington State	3754	9526**	2320	5776
University of Illinois	3746	10178	2372	6056
Oregon State	3618	TBD	2130	3417
Ohio State	3606	10710**	2984	10168
University of Missouri (m)	3550	6580**	930	1512
Mississippi State	3250	0	1358	0
University of Florida	3234	7494	2304	7104
University of Tennessee	3048	5920	1384	4016
Iowa State	2962	7104**	1546	3996
Purdue	2905	7225	1629	4835
North Carolina State	2150	4526**	631	2802
University of Georgia	1925	1925*	1407	3669
Oklahoma State	1754	5209	0	0
Kansas State	1685	4533**	1371	3175
Auburn	1395	3195**	1395	3195
University of California (Davis)	1373	1373*	1310	0
Texas A & M	1235	0	0	0
Louisiana State	800	1800*	1280	2280

TBD - To be determined
* Contract Student fees same as for residents; do not accept non-contract out-of-state students.
** Non-contract out-of-state student fees; contract student fees same as for residents.
*** Contract Students
\+ Non-contract students
(m) Median

(Reference: Veterinary School Admission Requirements in the U.S. and Canada, 1985-86. Betz Publishing Co., Inc. Bethesda, MD 1985, 139p).

SOURCE: AVMA, 1985

F. Educational Contracts

Due to the decrease in veterinary school applicants many colleges are willing to consider applicants from other states. Seventeen colleges have agreements that provide for admission of students from other states; nine colleges have no such agreements. Many agreements are with two regional organizations: the Southern Regional Education Board (SREB) and the Western Interstate Commission on Higher Education (WICHE). Table 15 represents contractual agreements for educational services that exist at U.S. colleges of veterinary medicine.

The University of Florida College of Veterinary Medicine presently has no educational contracts for services for residents of other states. During 1977-79, fifteen of the 80 vacancies were filled by Maryland residents under a Board of Regents (BOR) contract with the Southern Regional Education Board (SREB). The contract ended following the development of the Virginia-Maryland Regional College of Veterinary Medicine.

TABLE 15

FORMAL EDUCATIONAL CONTRACTS

School	State or Organization	Payment Per Student	Student Number
Louisiana State University	SREB	$ 7,000	24
	Puerto Rico	9,000	1
North Carolina State University	SC	7,560	2
Colorado State University	WICHE	13,900	62
Auburn University	KY	7,000	34
Kansas State University	AS, AR	13,900	0-3
	NB, WY	13,900	Open
	ND	13,900	0-2
	Puerto Rico	13,900	0-1
Iowa State University	NB	14,000	24
	ND	13,900	6
	SD	14,000	0
University of Georgia	SC	7,000	17
	WV	7,000	9
Washington State University	WICHE	13,900	15
	ID	19,764	15
	OR	19,764	28
Tuskeegee University	SREB	7,000	NS
	BARBADOS	13,500	NS
	BOTSWANA	11,500	NS
	GUYANA	12,500	NS
	JAMAICA	14,000	NS
	NJ, PUERTO RICO	12,500	NS
Ohio State University	MD, NB, NV, NH,	11,000	Open
	NJ, PR, WV	11,000	Open
University of Minnesota	NB	13,900	0-5
	ND	13,900	0-4
	SD, WI		Reciprocity
Tufts University	CT	11,500	12
	ME	11,500	4
	MA	7,731	102
	NH	13,100	12
University of Pennsylvania	CT, DE, VT	12,500	2
	ME, NH, PR	12,500	1
	MD	12,500	5
	NJ	12,500	15
University of California - Davis	WICHE	13,900	0-2
Virginia Tech University	MD	NS	30
Cornell University	CT, DE, NH, VT	12,500	2
	ME, PR	12,500	0-1
	MD	12,500	5
	NJ	12,500	7
University of Missouri - Columbia	NB	2,000	0-5

SOURCE: AVMC

V. ISSUES AND RECOMMENDATIONS

A. Veterinary Manpower

1. National Outlook

The U.S. Health Resources and Services Administration (HRSA) has projected a rise in the supply of veterinarians. Assuming that first-year veterinary school enrollments remain constant, the projections identify an average annual increase of 1,200 veterinarians between 1985 and 2000. The supply of active veterinarians would then increase from 42,600 in 1984 to 50,400 in 1990 -- an 18 percent increase in six years or an average of 3 percent annually. See Table 16. The ratio of active veterinarians per 100,000 population is projected to rise from 18.0 in 1984 to 20.1 in 1990 and 23.3 by the end of the century.

The HRSA has also modelled two alternative future scenarios assuming reduced or increased enrollments. Under both of these scenarios, there would still be an increase in the ratio of veterinarians to the general population. The low series of supply projections in Table 16 assume that reduced enrollments would occur as a result of declining federal funding, higher costs, and increasing competition, thereby reducing applications for veterinary education. The higher alternative series assume greater levels of support of veterinary education among state and local governments and small increases in first-year enrollments.

A 1985 veterinary medical manpower supply and demand study sponsored by the American Veterinary Medical Association concluded that baseline projections of supply and demand for veterinary medical services indicate a continuing surplus of private practitioners on a national level to the year 2000. This surplus of private practitioners results from a rate of increase in the number of veterinarians greater than the rate of increase in the need for services.

Neither a 20 percent decrease in the number of veterinary medical college graduates nor an increase in demand moderately higher than the base-line projection would have a significant impact on the surplus by 2000. On the other hand, nonprivate practice demands 5 percent higher per year than projected--considered unlikely--would have a moderate impact. Only a combination of higher-than-projected private and nonprivate demand coupled with moderate decreases in the numbers of veterinary graduates would eliminate the surplus.

The study also concluded that, because of anticipated demographic changes and shifts in the loci of agricultural production, the surplus will affect veterinarians in different areas of the country to different degrees.

TABLE 16

NUMBER OF ACTIVE U.S. VETERINARIEANS AND VETERINARIAN-TO-POPULATION RATIOS: SELECTED YEARS, Estimated 1970-1984, and Projected 1985-2000

Year and alternative projection	Number of active veterinarians	Active veterinarians per 100,000 total population
1970	25,900	12.5
1975	31,100	14.3
1980	36,500	16.0
1984	42,600	18.0
1985	43,900	18.3
Low	43,900	18.3
High	43,900	18.3
1990	50,400	20.1
Low	50,300	20.1
High	50,500	20.1
1995	56,800	21.9
Low	55,600	21.4
High	57,300	22.2
2000	62,700	23.3
Low	60,400	22.4
High	63,600	23.7

Source: Fifth Report on the Status of Health Personnel in the U.S. U.S. Department of Health and Human Services, 1986.

2. The Regional Outlook

Table 17 shows the growth in numbers and ratios to population in the United States and in the South. During the past fourteen years, the supply of veterinarians in the South, with a 100 percent increase, has risen at a faster rate than for the nation as a whole. Table 17 shows that the supply of veterinarians in Florida has increased 128 percent during these years. While the nation's supply of veterinarians per 100,000 population has remained constant, every Southern state has seen an increase in the number of veterinarians and in their ratio to the State's population.

TABLE 17

NUMBER OF U.S. ACTIVE VETERINARIANS AND VETERINARIAN-TO-POPULATION RATIOS, BY REGION, DIVISION, AND STATE: DECEMBER 31, 1970, 1980, AND 1984

Geographic area	1970		1980		1984	
	Active veterinarians	Active veterinarians per 100,000 resident population	Active veterinarians	Active veterinarians per 100,000 resident population	Active veterinarians	Active veterinarians per 100,000 resident population
UNITED STATES	25,900	12.7	36,000	15.8	42,570	17.9
SOUTH	7,472	11.8	11,599	15.2	14,163	17.5
South Atlantic	3,540	11.5	5,228	14.0	6,598	16.6
Delaware	78	14.2	82	13.7	93	15.1
District of Columbia	81	10.8	93	14.7	84	13.4
FLORIDA	853	12.4	1,440	14.4	1,946	17.6
Georgia	618	13.4	878	15.9	999	17.0
Maryland	643	16.3	828	19.4	988	22.6
North Carolina	406	8.0	681	11.5	963	15.5
South Carolina	203	7.8	288	9.1	357	10.8
Virginia	568	12.2	794	14.7	980	17.3
West Virginia	90	5.1	144	7.4	188	9.6
East South Central	1,351	10.5	2,120	14.4	2,547	16.6
Alabama	442	12.8	625	16.0	730	18.2
Kentucky	353	10.9	527	14.4	644	17.2
Mississippi	215	9.7	344	13.4	390	14.9
Tennessee	341	8.7	624	13.5	783	16.5
West South Central	2,581	13.3	4,241	17.5	5,018	19.1
Arkansas	211	11.0	342	14.9	432	18.3
Louisiana	307	8.4	573	13.4	709	15.8
Oklahoma	421	16.3	694	22.6	837	25.3
Texas	1,642	14.6	2,632	18.1	3,040	18.9

SOURCE: Estimated by Health Resources and Services Administration, Bureau of Health Professions, Division of Associated and Dental Health Professions.

A 1984 report issued by the Southern Regional Education Board (SREB) noted the steady increase in the number of graduating veterinarians in the South. According to SREB, the number of veterinarians graduating from schools in the South in 1990 will be 150 percent greater than in 1971. In 1971 southern schools produced 28 percent of the nation's veterinarians; in 1990 the proportion will have increased to 34 percent.

The number of students in schools of veterinary medicine is also increasing relative to the general population. As shown in Table 18, through the 1970s the South lagged the rest of the nation in the number of state residents entering veterinary training per 100,000 population. This may be partially explained by the fact that before 1973 there were only four veterinary medicine schools in the region. With the opening of additional schools, however, access was significantly expanded, and by 1982-83 more students per 100,000 population were entering schools in the South than in the rest of the

nation. See Figure 2. Florida remained behind the nation, region, and eleven of the fourteen SREB states. However, due to immigration of trained personnel, Florida matches the national average for practicing veterinarians per 100,000.

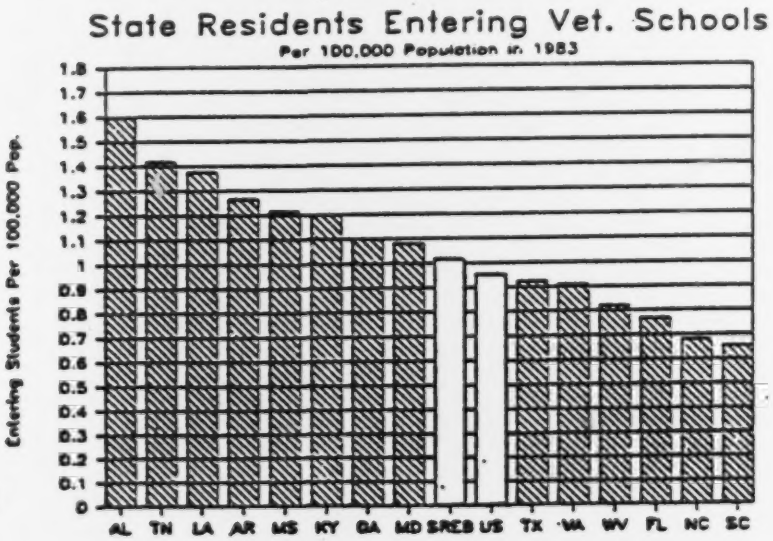
TABLE 18

STATE RESIDENTS ENTERING VETERINARY MEDICINE SCHOOLS, Per 100,000 POPULATION, 1970-71, 1973-74, 1976-77, and 1982-83

	1970-71	1973-74	1976-77	1982-83
Alabama	1.10	1.07	1.58	1.60
Arkansas	0.36	0.49	1.14	1.27
FLORIDA	**0.44**	**0.44**	**0.49**	**0.77**
Georgia	0.50	0.75	0.82	1.10
Kentucky	0.75	0.63	0.93	1.20
Louisiana	0.60	0.96	1.46	1.30
Maryland	0.38	0.47	0.60	1.08
Mississippi	0.86	0.91	0.93	1.22
North Carolina	0.37	0.51	0.64	0.68
South Carolina	0.46	0.44	0.49	0.66
Tennessee	0.38	0.59	1.02	1.42
Texas	1.09	1.15	1.11	0.92
Virginia	0.39	0.43	0.58	0.91
West Virginia	0.63	0.62	0.60	0.82
SREB Region	0.64	0.72	0.88	1.02
United States	0.70	0.77	0.98	0.95

Source: Southern Regional Education Board

FIGURE 2



Source: SREB

National and regional manpower studies of the veterinary profession that have been completed in the last decade concur that the existing enrollment levels of colleges of veterinary medicine combined with projected demand for service will produce a slight surplus of veterinarians through the end of the century.

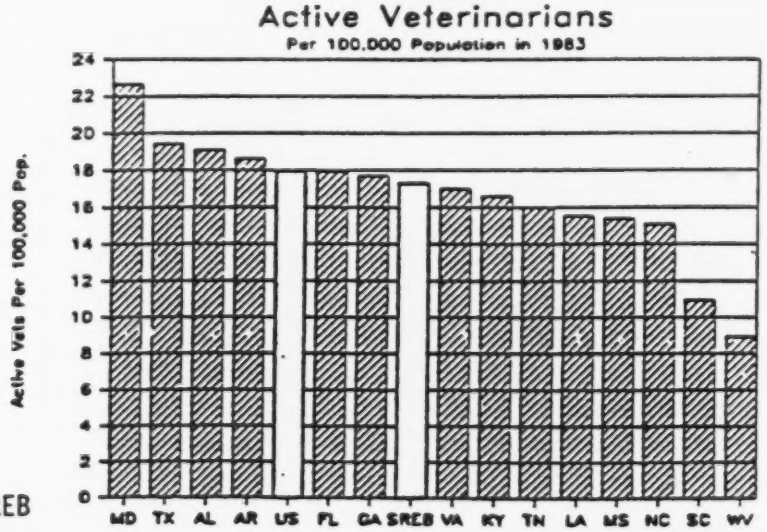
3. The Florida Outlook

Under contract to the University of Florida's College of Veterinary Medicine, the author of the AMVA national study referenced above conducted a parallel study of Florida-specific manpower supply and demand. The results show that trends projected for Florida differ in degree, but are otherwise similar to those anticipated to prevail throughout the nation as a whole. A combination of veterinary college graduates, residency program graduates and in-migration of veterinarians from other states is estimated to be more than sufficient to provide the needed veterinary manpower for Florida through the end of the century.

Scenarios were analyzed in which the graduating classes were reduced by 20 percent nationwide and in which they were reduced by 20 percent in Florida, Georgia, Auburn, and in contiguous geographic divisions, and by 10 percent elsewhere in the nation. The results indicate that Florida's veterinary supply and demand situation is determined by a regional market. A 20 percent reduction in Florida alone has little effect on the magnitude of the surplus, nor does a similar reduction in areas outside of the region.

Florida is a net importer of veterinarians. The State has one College of Veterinary Medicine at the University of Florida. The College reports that their graduates supply the State with only 20 percent of its veterinarians and that two of every three newly licensed veterinarians immigrate to this State. Whereas the State lags the nation and region in numbers of entering students per 100,000 population, in 1983 it had more practicing veterinarians per 100,000 than the region as a whole, and had matched the national ratio. See Figure 3.

FIGURE 3



Source: SREB

The baseline projection, considered to be the most plausible scenario, assumes that future supply and demand will be shaped by the same forces and policies that were present in 1985. This scenario predicts a moderate surplus of veterinarians through the turn of the century.

However, though there is a projected surplus of veterinarians in Florida in the near future, the Commission does not recommend a reduction in the enrollment levels at the University of Florida College of Veterinary Medicine for the following reasons. One, analysis has indicated that a reduction of 20 percent would not significantly affect the manpower supply in Florida due to the large in-migration of veterinarians. Two, there are more qualified Florida residents who wish to pursue veterinary education than there are spaces for. The University of Florida College currently accepts less than 20 percent of its applicants. Access should be maintained not only to provide needed manpower but also to allow Florida citizens to compete for jobs. Third, the College supports a large research effort much of which is focused on the particular needs of practicing veterinarians in Florida. Fourth, the school supports a clinical practice which provides critical high quality veterinary services.

1. The State of Florida should not increase the number of veterinary schools in light of the predicted surplus of veterinarians through the end of the century.

2. The current enrollment level at the University of Florida College of Veterinary Medicine should be maintained. The University of Florida College of Veterinary Medicine is sufficient to meet the State's needs for adequate veterinary manpower through the end of the century.

B. Veterinary Education Programs in Florida

1. College of Veterinary Medicine, University of Florida

a. Introduction - In 1965, the Florida Legislature authorized the University of Florida to establish a College of Veterinary Medicine. Following a study of the manpower requirements in veterinary medicine by the Board of Regents, a University of Florida committee recommended that the instructional activities be organized and budgeted as a component of the University's J. H. Miller Health Center and that the programs of the college concerned with extension and research on livestock and poultry diseases be developed and budgeted as part of the Institute of Food and Agricultural Sciences (IFAS).

The founding dean was hired in 1971. The charter class was admitted in the fall of 1976 and was graduated in 1980. Since that time approximately 510 veterinarians have been graduated from the professional degree (DVM) curriculum.

Construction of the Basic Sciences Building and Veterinary Medical Teaching Hospital (VMTH) were initiated in 1975 and both buildings were completed in 1978. The VMTH accepted its first patients in summer of 1978.

The College of Veterinary Medicine has focused on serving the needs of the public in a variety of significant ways including the practice of preventive medicine in relation to both human and animal health, solution of agricultural and wildlife problems, humane care of laboratory and research animals, research on diseases of animals, and provision of wholesome food.

The College of Veterinary Medicine (CVM) is a unique academic unit at the University of Florida. The CVM Dean, like other Deans of colleges (Medicine, Dentistry, Nursing, Pharmacy, and Health Related Professions) in the Health Science Center, reports to the Vice President for Health Affairs on all matters relating to the professional degree (DVM) program, the Veterinary Medical Teaching Hospital, and health/biomedical-related research.

Agricultural research, undergraduate instruction, and extension programs of the CVM dealing with food animals and their diseases are developed and budgeted as part of the Institute of Food and Agricultural Sciences (IFAS) through the Vice President for Agricultural Affairs.

The College is divided into ten departments: Comparative and Experimental Pathology, Comparative Opthalmology, Infectious Diseases, Medical Sciences, Physiological Sciences, Preventive Medicine, Reproduction, Special Clinical Sciences, Surgical Sciences, and Veterinary Radiology.

The College operates a Veterinary Medical Teaching Hospital which is a semi-autonomous unit consisting of three hospitals: Food Animal, Equine, and Small Animal.

b. Educational Facilities - The College of Veterinary Medicine consists of two buildings that were completed in 1977. The first building includes the administrative offices, teaching hospital and clinics, research laboratories and an animal research unit. It is located on a 100 acre site on the property of the J. Hillis Miller Health Center. The second building is a basic science and research unit located contiguous to the buildings of the Health Center.

In 1980-81, an academic space needs assessment was conducted by the College of Veterinary Medicine. Using the Board of Regents formula, the survey indicated that CVM-HSC instructional space was approximately 100,000 square feet less than needed. In 1983, the State Department of Education surveyed space devoted to the College's Health Science Center Programs, and, the previous year, a similar space survey was conducted for IFAS facilities. The conclusions of those surveys again noted a deficiency in excess of 100,000 square feet in academic space for the College of Veterinary Medicine. The College reports that the combination of both HSC and IFAS programs needs indicate that presently the College has less than 60 percent of instruction and space needs as calculated by the Board of Regents' formula.

The University of Florida College of Veterinary Medicine has recently completed the development of the first greyhound racing research track in the United States. The research track was constructed primarily with funds donated by the Florida Division of the American Greyhound Track Operators Association and will focus on research related to greyhound health care and racing safety.

c. Veterinary Medical Teaching Hospital - The College of Veterinary Medicine operates and maintains a Veterinary Medical Teaching Hospital (VMTH) that supports all programs of the College. The Hospital is a semi-autonomous unit with a separately identified budget within the CVM and consists of three hospitals: food animal, equine, and small animal.

According to the College, the missions of the VMTH are:

a) to provide clinical veterinary medical care and an environment conducive to the clinical education of veterinarians and other health professionals;

b) to provide an environment conducive to clinical research into the cause, treatment, and prevention of animal disease;

c) to serve as the primary resource for patient referrals from practicing veterinarians throughout Florida and the Southeast, and to assure the availability of those resources to care effectively for the problems referred for care.

Clinical instruction to Phase III students of the professional curriculum is provided through sixteen clinical services, each of which is headed by a Service Chief, who is responsible for the service and teaching functions of the service. In 1985-86, a total of 31 residents and one intern experienced clinical training in fourteen clinical services at the VMTH. The Food Animal Clinical Services, particularly the Rural Animal Medicine Service (RAMS), has treated over 40,000 animals. The patient case load in both the Equine Hospital and Small Animal Hospital continues to increase, with referral cases demonstrating the greatest increase. See Table 19.

TABLE 19

CASELOAD OF THE VETERINARY MEDICAL TEACHING HOSPITAL

	Years	Admissions	Outpatients	Total
SMALL ANIMAL HOSPITAL	1978	592	2,031	2,623
	1979	1,681	5,678	7,359
	1980	2,337	8,344	10,681
	1981	3,242	7,148	10,390
	1982	3,735	7,193	10,928
	1983	3,303	6,548	9,851
	1984	2,971	6,567	9,538
	1985	3,401	8,366	11,767
LARGE ANIMAL HOSPITAL	1978	390	170	560
	1979	711	537	1,248
	1980	990	700	1,690
	1981	1,015	707	1,722
	1982	1,209	710	1,919
	1983	1,394	817	2,211
	1984	1,694	862	2,556
	1985	1,804	874	2,678
AMBULATORY AND REPRODUCTIVE SERVICES*	1978	**	**	
	1979	**	**	
	1980	547	37,668	
	1981	700	47,497	
	1982	905	53,910	
	1983	1,013	58,000	
	1984	1,037	61,692	
	1985	978	58,659	

* "Ambulatory calls" include traditional 'sick' calls and planned herd health visits.

** Data Unavailable.

Source: U.F.C.V.M.

The following represents the 1985-86 caseload at the equine hospital:

In-patient: 1,404
Out-patient: 854

Foals (Equine Neonatology Program): 47
Other (including Wildlife + Zoo patients): In11 Out0

As in other years, the year-round bulk of emergency cases in 1985-86 involved horses with colic. While the majority of patients came from the immediate region, particularly the Ocala area, patients were admitted from most counties in the State. A total of 47 foals (less than two weeks of age) were examined. Of these, three had lethal congenital defects and two were dead on admission. Thirty-four foals were discharged and eight died or were euthanized. The increasing number of referrals from practicing veterinarians and from the State's producer groups to provide critical care services has placed a burden on the existing facilities of the hospital and has affected the educational opportunities for clinical veterinary students.

3. The Board of Regents should review the educational mission statement of the Veterinary Medical Teaching Hospital to ensure that caseload selection criteria supports an optimal variety of educational opportunities for veterinary students.

The Commission received testimony from College administrators and faculty that their service to the State is significantly limited by critical space needs particularly at the hospital facility. In the 1986 program review, the Board of Regents found significant space limitations at the College, particularly in regards to academic space and the equine hospital. The Board recommendation was to:

> Begin detailed plans for additional new facilities, combining basic science, clinical and research facilities into a more compact and functional unit. An infectious disease facility should be of highest priority, to prevent exposure of client animals and humans to highly transmissible diseases.

Aware of the growth industries in the State and of the exemplary faculty at the College, the Commission recognizes that with adequate clinical and hospital facilities, the College has the opportunity to become the primary equine and greyhound center in the Southeast.

4. The Commission supports the Board of Regents Program Review recommendation that the College, the University of Florida and the Board of Regents should take action to address space and resource shortages, particularly in the clinical and hospital facilities.

d. Admissions - At the University of Florida College of Veterinary Medicine, the number of qualified applicants for the 80 vacancies each year has been relatively constant, between 284-332 during the period 1976-85. About 75 members of each class are Florida residents and the applicant: acceptance ratio has been fairly stable at about 3.7:1. Table 20 represents the profile of students enrolled in the College of Veterinary Medicine during the academic year 1985-86.

TABLE 20

CHARACTERISTICS OF CURRENTLY ENROLLED STUDENTS IN THE COLLEGE OF VETERINARY MEDICINE

	Graduation Year			
	1986	1987	1988	1989
Number Enrolled	80	80	80	80
Female	39	41	40	50
Male	41	39	40	30
Minorities				
Black	0	3	1	1
Spanish Surname	1	6	4	2
Oriental	1	1	1	3
Average Age (yr)	23.6	24.2	24	24
Highest Degree Held				
Bachelor's	52	59	77	65
Master's	4	8	12	5
Major Undergraduate Institution Attended				
Florida University (SUS)	41	55	43	49
Other 4 yr College/University in Florida	1	4	4	5
4 yr College/University outside Florida	38	21	33	26

Source: CVM, University of Florida, 1986.

Table 21 shows the applications and admissions of Florida residents to the College.

TABLE 21

UNIVERSITY OF FLORIDA COLLEGE OF VETERINARY MEDICINE
ADMISSION INFORMATION FOR FLORIDA RESIDENTS

Year	Number Applied	% of Total Applicants	Number Offered Positions in Class	Number Enrolled	% of Total Enrolled	Enrolled in Other Colleges of Vet. Med.
1982	221	84.4%	75	74	92.5%	6
1983	221	81.8%	76	75	93.8%	4
1984	217	74.1%	78	76	95.0%	3
1985	201	60.5%	75	73	91.2%	3
1986	177	63.8%	73	72*	90.0%	N/A

*Anticipate

Source: U.F. C.V.M., 1986.

e. Tuition and Fees - Tuition at the College of Veterinary Medicine is $3,052.00 for 1986-87. As indicated in Table 14, of the 27 colleges in the country fifteen have higher tuition charges than the University of Florida. Veterinary tuition and fees are the same as medical and dental school fees. Approximately 45 percent of the total expenditures for the College is received from sources other than State appropriations. In 1985-86, in addition to the $8,318,789 in state appropriations, the College received operating funds from the following sources: contracts and grants ($2,156,679); agricultural experiment station ($1,821,877); teaching hospital/clinic fees ($2,280,816); and gifts and endowments ($771,214). See Table 22.

TABLE 22

UNIVERSITY OF FLORIDA COLLEGE OF VETERINARY MEDICINE
IN-STATE TUITION INCOME AND EXPENDITURES PER STUDENT

Year	In-State[b] Tuition	State-Appropriated Expenditures	Headcount Students	Expenditures Per Student	Tuition as Percentage of Expenditures Per Student
81-82[a]	$1402.60	$7,094,601	317	$22,380	6.27%
82-83	$1683.60	$7,118,242	317	$22,455	7.50%
83-84	$1683.60	$7,265,116	318	$22,846	7.37%
84-85	$2104.50	$7,938,548	316	$25,122	8.38%
85-86	$2630.63	$8,318,789	316	$26,325	9.99%
86-87	$3052.00	$8,734,728	317	$27,554	11.08%

[a] Fees were increased to the 1982-83 level in Spring of 1982.

[b] Excludes other fee charges.

Source: State University System.

The Commission's 1985 Medical Education Report recommended increasing the tuition to reflect more adequately the higher per student expenditures in medical school. In response to the Commission's recommendations, the Board of Regents increased the tuition in 1985-86 and 1986-87 to its current level which represents a 50 percent increase. Because of the recent increases, no further changes are being recommended at this time.

f. Curriculum - The College curriculum provides for an 8-semester program (151 semester credits) consisting of a core didactic curriculum and core-elective clinical clerkships. The core provides the essential body of knowledge and skills that are common to all veterinarians. Although the first five semesters of the first three academic years relate primarily to basic medical sciences, students are introduced to physical diagnosis, radiology, and clinical problems as early as the first semester of the first year.

The core also includes experience in each of the clinical services (clerkships) which require a sound foundation in the basic sciences. Elective clinical clerkships permit the student to study in depth those aspects of both basic and clinical veterinary medical science which are most relevant to the individual's interest and needs.

The Rural Animal Medicine Service (RAMS) is a unique clerkship program that provides emergency healthcare and production medicine programs to University (IFAS) herds, and private herds under contract to the VMTH. Five faculty members, one resident, and one intern provide the manpower to instruct students who are assigned to the RAMS clerkship. Crew-cab trucks, with mobile veterinary units, are used for making farm calls and transporting students. Four to eight students are assigned per group and spend two weeks on the clinical rotation. The range of species attended to, and services provided, by the RAMS clinicians are diversified and approximate those of a veterinary practitioner. Table 23 illustrates the number of farm herds served, visits made, animals under RAMS veterinary supervision, and "hands-on" cases seen during 1985-86.

TABLE 23

RURAL ANIMAL MEDICINE SERVICES (RAMS)

	Cow/Calf Beef Cattle	Beef Cattle Feed Lot	Dairy Cattle	Porcine	Caprine Ovine	Equine	TOTAL
Herds	8	1	11	7	5	2	34
Herds Visits	46	22	306	60	20	54	508
Herd Size (total animals)	8,102	21,000	26,250	6,748	800	325	63,225
Cases (hands-on)	4,748	2,067	28,735	3,650	125	1,107	40,432

Intern/Resident training opportunities are available in all of the VMTH clinical services, except Radiology and Cardiopulmonary Medicine.

g. Specialty Selection - An ongoing issue in veterinary education has been the emphasis given to small versus large animal veterinary practice. Concern has been expressed that veterinary colleges produce a disproportionate number of students interested in small companion animal, or pet, practice. The data indicate that only 10 percent of the students of the University of Florida College of Medicine opt for small animal practice solely. Food animal practice account for 20 percent, equine practice 13 percent, and mixed practice, 48 percent.

Furthermore, the number of large animal and particularly equine practitioners is increasing at a greater rate than small animal practitioners. Between 1980 and 1985 the number of small animal practitioners in Florida increased 38 percent, large animal practitioners 45 percent, and equine practitioners 66 percent.

5. Because of the increasing number of students at the University of Florida selecting large animal practice, the Commission does not recommend any changes in current admission polices and selection criteria.

h. Degrees and Graduates - The charter class of 39 students was graduated in June 1980. Between 1980 and 1985, the College graduated 430 veterinarians. See Table 24. During the same period, 40 M.S. degree and 5 Ph.D. degree students, supervised by CVM faculty, were graduated. Also, 7 interns and 53 residents completed the requirements of their respective programs.

TABLE 24

Career Interest and Numbers of Graduates from the Professional Degree (DVM) Program, College of Veterinary Medicine

	Graduation Year					
	1980*	1981**	1982**	1983**	1984	1985
Number Enrolled	40	80	80	80	80	80
Female	13	29	25	37	38	38
Male	27	51	55	43	42	42
Minorities						
Black	0	2	0	1	0	0
Spanish Surname	2	3	2	0	2	1
Oriental	0	0	0	0	0	1
American Indian	0	1	1	0	0	1
Average Age (yr)	23.5	23.4	22.9	22.8	23.4	23.5
Average Prevet GPA	3.60	3.47	3.39	3.54	3.54	3.46
Average Prevet Science GPA	3.60	3.29	3.20	***	***	3.24
GRE						
Verbal	***	***	***	***	562	507
Quantitative	***	***	***	***	631	626
TOTAL	1205	1176	1176	1127	1193	1133
Highest Degree Held						
Bachelor's	30	***	57	62	54	51
Master's	7	***	9	7	7	2
Major Undergraduate Institution Attended						
Florida Regent's Univ. (SUS)	45%	52%	67%	50%	66%	59%
Other 4yr College/ Univ. in Florida	27.5%	22%	11%	2%	3%	11%
Other 4yr College/ Univ. outside FL	27.5%	26%	22%	48%	31%	24%
2yr Colleges in FL						4%
2yr Colleges outside FL						2%
Number Graduated	39	76	80	77	81	77
Prevet Major						
Animal Science			31	31	25	27
Biology/Zoology			24	21	31	20
Chemistry			9	5	4	6
Computer Science						1
Dairy Science			8	5	3	4
Engineering						1
Human Pathology						1
Microbiology			6	6	8	16
Nutrition						1
Poultry Science						2
Other			2	12	9	1
Career Interests						
Food Animal Practice	20%	14%	10%	17%	8%	12%
Equine Practice	13%	16%	8%	17%	8%	13%
Mixed Practice	48%	48%	46%	42%	37%	35%
Small Animal Practice	10%	11%	12%	8%	22%	14%
Academic Career			4%	7%	7%	7%
Laboratory Animal			1%	0%	0%	1%
Zoological Medicine (including marine)			17%	8%	15%	14%
Regulatory Medicine			0%	0%	0%	1%
Public Health			0%	0%	0%	1%
Industrial			0%	0%	0%	2%
Undecided			2%	1%	3%	0%

*Florida residents only.
**Includes 15 Maryland residents.
***Not available.

SOURCE: CVM, University of Florida

Interestingly, a significant number of professional degree (DVM) students entered the College of Veterinary Medicine without a bachelor's degree. See Table 25.

TABLE 25

College of Veterinary Medicine Graduates with Bachelor's Degree at Time of Enrollment

Graduation Year	Total Enrolled	Bachelor's Degree	No Bachelor's Degree
1982	80	57	23
1983	80	62	18
1984	80	54	26
1985	80	51	29
1986	80	72	08

Source: U.F.C.V.M., 1986

Table 26 displays a geographic distribution of College of Veterinary Medicine graduates compiled from alumni office records.

TABLE 26

GEOGRAPHIC DISTRIBUTION OF C.V.M. GRADUATES

Graduation Year	Graduates	FL	Out-of-State	Unknown
1982	80	49	29	3
1983	77	42	35	0
1984	81	42	39	0
1985	77	51	26	0
1986	79	54	25	0

SOURCE: U.F.C.V.M., 1986.

Informal data obtained by College administration inquiries have indicated that C.V.M. graduates pursue a mixed practice (40 percent); small animal practice (14 percent); food animal practice (12 percent); and equine practice (12 percent).

6. In order better to assess admission policies, curriculum and program effectiveness, and to ensure that the College of Veterinary Medicine is producing veterinarians that are trained to meet the manpower needs of Florida, (i.e. small animal, large animal or equine practitioners), the C.V.M. should strengthen its efforts to track its graduates and record the type of animal practice in which they are employed.

Examination statistics from the Department of Professional Regulation reveal that University of Florida veterinary graduates have done exceedingly well on national licensure examinations. Table 27 shows the results of recent veterinary licensure examinations administered in Florida.

TABLE 27

VETERINARY LICENSURE EXAMINATION STATISTICS

		Passed		Failed	
1985-86	Total Examinees	Number	Percentage	Number	Percentage
U.F.C.V.M. Graduates	90	80	89	10	11
Non-Florida Graduates	553	325	59	228	41
Totals *	643	405	63	238	37
*for two dates					
1984-85					
U.F.C.V.M. Graduates	148	138	93	10	07
Non-Florida Graduates	509	274	54	235	46
Totals	657	412	63	245	37

Source: Department of Professional Regulation, 1986.

i. Minority Access and Retention - The veterinary profession, historically, has been predominantly white and male. In 1982, of the 37,507 veterinarians in the United States, 37,768 (87.4%) were male and 98.7 percent were Caucasian. The underrepresentation of blacks in the profession has been attributed to the following factors: the low profile of the profession, the lack of role models, the limited numbers of blacks in the professions and the poor retention rate of blacks in veterinary colleges.

Table 28 shows a significant increase in the number and percentage of women veterinary students and a fairly constant rate of black veterinary students during the last fifteen years.

TABLE 28

MINORITY AND FEMALE TOTAL ENROLLMENTS IN U.S. COLLEGES OF VETERINARY MEDICINE ACADEMIC YEARS 1971-1972, 1974-1975 and 1983-1984

1971-1972						
Total	Black	Percentage	Other Minority	Percentage	Women	Percentage
5,149	96	1.8	37	0.7	592	11.5

1974-1975						
Total	Black	Percentage	Other Minority	Percentage	Women	Percentage
5,763	115	2.0	60	1.0	1,014	17.6

1983-1984						
Total	Black	Percentage	Other Minority	Percentage	Women	Percentage
8,672	202	2.3	250	2.9	4,085	47.1

Source: Fifth Report on the Status of Health Personnel in the U.S. U.S. Department of Health and Human Services, 1986

In 1984-85, 8,917 students were enrolled in Colleges of Veterinary Medicine (CVM) in the United States. Of these students, 160 (1.8%) were blacks. Of the 27 CVMs, only 17 schools have black students and 108 (67.5%) of the total black students are at Tuskegee Institute. The CVM with the largest black student enrollment is the University of Pennsylvania with 10 blacks. The University of Florida, University of California-Davis, and Virginia Polytechnical Institute have 5 black students each.

Table 29 shows the percentages of minorities and women accepted in the professional degree (DVM) program at the University of Florida. Since its inception, the College has regularly surpassed national statistics. Throughout its development, the College of Veterinary Medicine has utilized several mechanisms designed to increase the numbers of black faculty and improve the recruitment of black students. A key plan in this process is to raise the visibility of the veterinary profession among high school and college-aged black students who are potential applicants to the professional degree (DVM) program. In addition to recruitment strategies, the School has focused efforts on assuring that these students will complete the program and be graduated as veterinarians. The retention rate for black students of the CVM continues at 100 percent since 1978.

TABLE 29

STATISTICS ON STUDENTS ACCEPTED INTO THE PROFESSIONAL DEGREE (DVM) PROGRAM, COLLEGE OF VETERINARY MEDICINE UNIVERSITY OF FLORIDA

YEAR

CATEGORY	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	TOTALS	%OF TOTAL
Male	27	50	55	43	42	42	41	39	40	30	409	53.8
Female	13	30	25	37	38	38	39	41	40	50	351	46.2
TOTAL	40	80	80	80	80	80	80	80	80	80	760	100.0
White*	38	75	77	79	78	75	78	70	74	74	718	94.5
Black	0	2	0	1	0	1	0	3	1	1	9	1.2
Hispanic	2	2	2	0	2	3	1	6	4	2	24	3.2
Native American	0	1	1	0	0	1	0	0	0	0	3	0.4
Asian	0	0	0	0	0	0	1	1	1	3	6	0.8
ALL MINORITIES	2	5	3	1	2	5	2	10	6	6	42	5.6

* Does not include Hispanics

Source: CVM, University of Florida. 1986.

The Post-Baccalaureate Training Program was initiated in 1978 to offer opportunities for academic enrichment to minority students (primarily black) who are interested in veterinary medicine as a career. Candidates for the program are recruited through contacts at black institutions. Each student entering the program is assigned to a CVM faculty member for counseling. Each student is required to take a suitable academic load, courses are selected to complete fulfillment of course prerequisites, strengthen apparent academic weaknesses, and broaden the student's academic base. Students also are assigned, on a rotating basis, to faculty members for supervision of clinical and laboratory experiences. Other retention programs include a health Sciences Center Summer Workshop for Minorities and a faculty advisor system in a Big Brother/Big Sister Program for incoming first-year students. In 1984,

the College initiated a policy to allow first-year students to repeat the first year of the program where there appeared to be legitimate reasons for poor academic performance.

The Special Intern/Resident Program of the School is intended to identify recently graduated black veterinarians who are interested in obtaining additional experiences in one or more clinical areas of the Veterinary Medical Teaching Hospital over the period of one year for interns and two to three years for residents. Completion of either of these programs would provide the necessary experiences/training required for an academic appointment in any College of Veterinary Medicine. Since the program began in 1979, six black veterinarians have completed the program and one currently is enrolled.

On a national average, about 2.6 percent of veterinary faculty are black. There are approximately 70 black faculty at the 27 colleges of veterinary medicine in the United States. Approximately forty-one of these faculty are at Tuskegee Institute. At the University of Florida College of Veterinary Medicine, there are three black and one oriental faculty members.

7. The CHOICES system maintained by the Center for Career Development Services should include information about the University of Florida College of Veterinary Medicine Post-Baccalaureate Training Program.

8. Information about the University of Florida Veterinary Medicine program should be presented at the annual University of South Florida statewide graduate opportunities conference for minority students.

9. The Board of Regents should conduct an analysis of the usage of SUS grant-in-aid monies to assure that the needs of minority veterinary students are being met adequately.

j. Faculty - College of Veterinary Medicine (CVM) faculty maintain vigorous involvement in biomedical research. In 1984-85, sixty-nine grants were funded bringing over $2 million in additional extramural funds to the CVM. For FY 1985-86, 127 grant requests totalling $5,632,029 were submitted by CVM faculty to extramural agencies. The faculty achieved a 54 percent success rate as 68 of the grant requests were funded. The total value of the 94 funded grants in effect during this year was $6,684,968. CVM faculty are involved in the following areas of research: biotechnology, equine neonatology pediatrics, reproductive biology, oncology, avian disease research, food animal disease research, comparative orthopaedics, equine health care disease research, and aquatic animal medicine.

k. Continuing Education and Extension Services - The effective transfer of new knowledge and techniques to practicing veterinarians through continuing education programs is an extremely important responsibility of the CVM. The major continuing education effort of the College of Veterinary Medicine in the last few years has been the Florida Conference for Veterinarians held at the College which is attended by over 300 veterinarians. At these annual conferences, a majority of faculty and residents provide updates, workshops and interest sessions on current issues in veterinary medicine.

Through IFAS and the Cooperative Extension Service, extension veterinarians provide consultations, seminars and educational materials to county extension personnel, livestock producers, companion animal owners, other animal industries, practicing veterinarians and the general public. A Veterinary Medicine Newsletter and an Equine Newsletter are published monthly and distributed to veterinarians, county agents and veterinary students. Table 30 shows the involvement of faculty in extension activities. The extension veterinarians are all part of the Department of Preventive Medicine.

TABLE 30

EXTENSION FACULTY PRESENTATIONS AND ASSISTANCE TO COMMODITY GROUPS

	1981-82	1982-83	1983-84	1984-85	1985-86
Presentations	29	58	16	48	38
Publications	7	7	39	15	22

Source: U.F.C.V.M., 1986.

The IFAS-CVM veterinary education program is, with its present focus on food animal and companion animal industry education, "industry-oriented." The extension program is responsible for pro-active major programs of work involving College faculty, county extension faculty and commodity groups that are designed to foster cooperation and awareness in order to find solutions to current and future industry-wide problems. The extension faculty of the CVM work closely with their colleagues in the Animal and Dairy Sciences. The pro-active major program areas in veterinary extension are Beef Cattle, Dairy Cattle, Equine, Human Animal Bond, and 4-H. Minor areas are Swine, Goats, Rabbits, and Alligators. Avain disease (primarily poultry) will be a future major area of activity.

2. Veterinary Technology

a. The Veterinary Technician Profession - Veterinary technicians assist veterinarians in the protection of animal health, the relief of animal suffering, the conservation of livestock resources, the promotion of public health, and the advancement of medical knowledge. In general, the duties of an animal technician in a veterinary practice may include any part of the practice which does not involve diagnosis, prescription, surgery, or any activities prohibited by the veterinary practice act of the state in which a technician is employed. All functions of an animal technician are performed under the supervision of a veterinarian. Duties include: record keeping, preparing patients and equipment for surgery, laboratory procedures, assisting in diagnostic, medical and surgical procedures, and general animal care.

Students typically pursue training in veterinary technology in order to work with animals in a private practice or in a zoological park. Technicians with specialized training in animal health and care, however, are also employed in

public health organizations, research institutions, pharmaceutical manufacturers, and universities.

A 1986 national survey of accredited animal technology programs conducted by the American Veterinary Medical Association revealed that there are approximately 10,000 graduates of animal technology programs who are currently employed as technicians. Educators estimate that less than five percent are male. Sixty-nine percent of the 1986 graduates were employed in small animal practice. The technician workforce has been influenced by a number of debilitating factors, including low salaries and limited prospects for advancement. The A.V.M.A. survey revealed that the average starting salary was $10,865 and the average technician salary was $13,205.

In a recent national survey of veterinarians in private practice, a professional journal found a median income of $12,381 for veterinary technicians. See Table 31. The 690 veterinarians who responded to the survey also indicated that only sixteen percent of technicians had worked at the same hospital for over ten years. The median length of employment was four years.

TABLE 31

VETERINARY TECHNICIANS' EARNINGS IN PRIVATE PRACTICE

Salary	Percent of Technicians
Under $10,000	6
$10,000 - $11,999	31
$12,000 - $13,999	34
$14,000 - $15,999	18
$16,000 - $17,999	5
$18,000 - $19,999	1
$20,000 or more	5
Median $12,381.00	

Source: Veterinary Economics, September 1986.

Some students drop out of the profession completely while others work for pharmaceutical firms, drug distributors, colleges of veterinary medicine, federal or state government, or veterinary technician schools. Most of these alternatives provide better salaries, benefits and hours of employment. High employee turnover is also attributed to the fact that a majority of technicians are young women who move in and out of the workforce.

Veterinary technology is not a precursor of professional veterinary preparation. Despite rigorous admission and graduation requirements however, veterinary technicians occasionally pursue professional education in Colleges of Veterinary Medicine. Some of the technician courses can be transferred as a portion of the required pre-vet curriculum.

The American Veterinary Medical Association has reported an increasing need for personnel qualified by formal training to assist in veterinary practices, biological laboratories, animal research, food inspection and other areas that require knowledge of both science and animals.

A veterinary technology survey was carried out in 1982 by Santa Fe Community College to assess the current and future need for veterinary technicians in Florida. The vast majority of the 330 respondents, over 80 percent, were owners or directors of private veterinary practices who have employed or worked with veterinary technicians. Over 91 percent of the veterinarians felt that veterinary technicians were an integral part of veterinary medicine and could save the veterinarians time and money. The required veterinary technician skills identified through the survey included a thorough knowledge of clinical laboratory methodology, radiology, pharmacology, anesthesiology, animal restraint, basic nursing techniques, and surgical assisting. Almost 50 percent of the respondents said they have repeatedly had difficulty filling a veterinary technician position, and 57 percent viewed the supply of technicians at that time as inadequate. Although many veterinarians hire unskilled individuals and train them for selected technical tasks, 72 percent of the veterinarians surveyed felt they could not train technicians as completely as a college-level program. In a five-year projection, the survey found a need for at least 600 positions for veterinary technicians in Florida, a projection that was based on the estimated needs of only 20 percent of the veterinarians in the state.

There are approximately two hundred technicians currently employed in Florida. With the number of practicing veterinarians stabilizing at approximately 1,200, the Veterinary Technology Program Director of St. Petersburg Junior College reports that the demand in the State for technicians remains high. At present, only about one in ten veterinarians in the State employ technicians.

Table 32 represents a compilation of national surveys of animal technology programs that are conducted annually by the American Veterinary Medical Association. The data indicate that the numbers of graduates and the numbers of applications are decreasing, and that the surplus of employment opportunities is increasing.

TABLE 32

SURVEY OF U.S. VETERINARY TECHNOLOGY PROGRAMS

Year	1980	1981	1984	1986
#Graduates	1385	1485	1244	1210
#Applicants	N/A	N/A	3760	2730
#Employed	911	910	861	885
#Seeking Jobs	197	213	181	227
#Jobs on File	800	929	1600	2411
#Surplus Jobs	603	716	1419	2184

Source: Compilation of A.V.M.A. Annual Surveys.

The Florida Veterinary Medical Association (FVMA) developed a certifying examination for veterinary technicians. Graduates of an AVMA-accredited program in animal technology or technicians previously certified in other states may sit for the examination and those who successfully pass may work in the state as certified veterinary technicians. The FVMA has also established continuing education requirements for veterinary technicians. Ten credit hours of continuing education every two years must be completed in order to maintain certification.

b. Veterinary Technology Education - Veterinary technology education programs are designed to develop the knowledge, understanding, and abilities required of technicians who work under the professional supervision of a veterinarian. Most programs cover two academic years and lead to an Associate in Applied Science or equivalent degree. The core curriculum of an animal technology program includes: fundamentals of chemistry, applied mathematics, communication skills, humanities or liberal arts, and biological science. Accredited programs offer students practical experience with live animals.

The A.V.M.A. national survey found that, in 1986, 1210 technicians graduated from fifty-nine accredited animal technician programs. Additionally, there are three four-year programs in animal technology in the U.S. that offer the bachelor of science degree. The survey reported that the average attrition rate for animal technology students is 34 percent from enrollment to second year and 41 percent from enrollment to graduation.

c. Veterinary Technology Programs in Florida - The State of Florida has an established veterinary technology program at St. Petersburg Junior College. The two-year program began in 1971 and has been accredited by the American Veterinary Medical Association.

At S.P.J.C., 125 applications were received for the August 1986 class that is limited to 80 students. Seventy students actually enrolled in the first year of the program. Two-thirds of the students in the program were referred by veterinarians. Of the 119 students enrolled for academic year 1986-87, 42.5

percent came from Pinellas County, 50 percent from other counties in Florida, and 7.5 percent from out-of-state. In addition to the St. Petersburg area, many students come from the Orlando and Ft. Lauderdale areas of the State. The program contains recent high school graduates and students with many years of experience employed in a veterinary setting. There are enrolled students with A.S., A.A., B.S., and M.S. degrees.

Table 33 shows enrollment, completion and placement information on the St. Petersburg Junior College program. The program has graduated three hundred and sixty-five technicians in the past fifteen years.

TABLE 33

ST. PETERSBURG JUNIOR COLLEGE

	1st & 2nd Year Enrollments	Completions	Placements
1981-82	65	27	NA[1]
1982-83	59	24	NA
1983-84	64	15	9[2]
1984-85	97	28	24[2]
1985-86	101	25	NA[3]

[1] Not Available.

[2] Placed in field, continuing education or in the military.

[3] Will be available in August 1987.

Source: Division of Community Colleges, 1986.

In 1985-86, 100 percent of St. Petersburg Junior College graduates (28) successfully passed the F.M.V.A. certification examination. One student earned the highest score in the nation. In 1984-85, 87.5 percent of St. Petersburg Junior College graduates passed the exam.

The program achieved greater than 85 percent placement rate of its graduates in 1985. Since the 1986 graduation, the College has received 82 requests for qualified veterinary technicians that it was unable to fill. The Program Director testified that demand for trained technicians continues to increase and reported that there is an acute lack of awareness of the veterinary technology program outside of the immediate St. Petersburg geographic area.

Since the program's inception, externships have been available at the local level where students work eight hours per week in a local veterinary hospital

during the four semesters of the program. This involvement totals 224 hours of on-the-job experience for all students who complete the program. The University of Florida College of Veterinary Medicine formerly had a cooperative program with St. Petersburg Junior College that provided clinical training in the Veterinary Medicine Teaching Hospital (VMTH) for their veterinary technology graduates. A mandatory six-month externship at the College of Veterinary Medicine followed four semesters in sequence at the St. Petersburg campus. The University of Florida externship program was terminated in 1980.

The University of Florida College of Veterinary Medicine and Santa Fe Community College in Gainesville are currently reviewing the feasibility of the development of a cooperative veterinary technology program at Santa Fe Community College.

Merryfield Academy of Animal Technicians, an independent school in Ft. Lauderdale, currently has a six-month vocational program with 20 students enrolled. The Academy is licensed by the Florida State Board of Independent Postsecondary Vocational, Technical, Trade and Business Schools and is accredited by the National Association of Trade and Technical Schools. The program format consists of six modules, each involving approximately 60 hours of training in a specialized veterinary area and approximately 40 hours of training in practical clinical applications. The total contact hours for this program are approximately 50 percent of what are required of veterinary technician students.

Data provided by the St. Petersburg program reveal that the program has not been enrolled to capacity and there is concern over student attrition in light of the unmet need for technicians in the State. The President of the Florida Veterinary Medical Association provided testimony on the pressing need for technicians in the State. The Commission also received testimony from members of the FVMA Veterinary Technician Committee in support of the need for more active recruitment, program promotion and dissemination of information about the St. Petersburg Veterinary Technology program. The Program Director reported that veterinarians throughout the State distribute program brochures on a small scale and, when possible, attend high school career days. Although the administration and faculty of the St. Petersburg Program travel to speak to regional veterinary associations, counselors of community colleges and high school career days, and send brochures to high schools and community colleges, their recruitment activities are limited due to the high costs of travel, printing and mailing. It is clear that to attract a greater number of well qualified students to veterinary technology, a well planned, comprehensive statewide recruitment program is needed.

10. The Division of Vocational, Adult, and Community Education through its Center for Career Development Services should insure that the St. Petersburg Junior College Veterinary Technology Program is included in the Florida CHOICES and Florida VIEW programs and in all published program inventories.

11. The St. Petersburg Junior College Veterinary Technology Program should enlist active involvement of veterinarians around the State and utilize the Florida Veterinary Medical Association to expand its

statewide recruitment activities and more effectively disseminate information on the Program to high school counselors and students in all regions of the State.

The Commission has received considerable testimony in regards to the need for veterinary technology education programs and the demand in Florida for technicians. The President of the Florida Veterinary Medical Association and members of the FVMA Veterinary Technology Committee have recommended the establishment of two new technology programs, preferably in the southeast part of the State and in the north central area. The Dean of the College of Veterinary Medicine at the University of Florida supported the opinion that the market demand for veterinary technicians is high, both for private practice and research positions.

During the development of the Comprehensive Health Professions Education Plan, the Commission has identified health professions education programs whose high cost and relatively fixed demand has necessitated a statewide approach for their development. The State Board of Community Colleges has developed a procedure, recommended in The Master Plan For Florida Postsecondary Education, for the designation of Centers of Excellence at the State level to focus limited resources on high cost programs in a limited number of locations.

12. The St. Petersburg Junior College Veterinary Technology program should pursue with the State Board of Community Colleges the designation as a Center of Excellence.

13. As the St. Petersburg Junior College Veterinary Technology program becomes more fully subscribed, the State Board of Community College should evaluate the need for additional two-year programs in other regions of the State. If additional centers are deemed necessary to meet the access needs and manpower needs of the State, consideration should be given to the populous region of southeast Florida and to the north central region that is close to the University of Florida College of Veterinary Medicine.

C. Graduates of Foreign Veterinary Schools

Concern has been expressed over the large number of veterinarians who are trained in foreign veterinary schools and who seek licensure by examination in Florida. The Florida Board allows foreign graduates of recognized veterinary schools, not necessarily accredited schools, to take the national examinations. The Education Commission for Foreign Veterinary Graduates certificate is required in Florida only after licensure examinations are failed three times. Due to the fact that so few states permit foreign graduates to take the examinations, foreign graduates are attracted to Florida as a state to attempt to receive U.S. licensure. The high number of foreign veterinary examinees makes Florida examination pass-fail rates inconclusive.

14. The Commission supports the efforts of the Department of Professional Regulation to modify the Florida licensure process in order to require all foreign veterinary school graduates to obtain the E.C.F.V.G. certificate in order to be eligible to sit for the licensure examination in Florida.

VI. CONCLUSION

The citizens of the State of Florida are being well-served in regards to the quality of preparation for veterinarians in the State. The University of Florida College of Veterinary Medicine is one of twenty-seven colleges in the United States and is the only College of Veterinary Medicine in Florida. Since 1980, when the first graduates began practice, the College has focused its curriculum and training on the development of professional practitioners to meet the animal health care needs of the citizens of the State. Additionally, the College has provided an active and diverse center of research to address the health and food production concerns of Florida's animal population.

The State's only public two-year program in Veterinary Technology is at St. Petersburg Junior College. The program has been highly successful in providing technician training for the State and the employability of their graduates remains high. The Florida Veterinary Medical Association has reported an increasing demand for trained veterinary technicians. Through the process for designating State and regional centers of excellence and the development of cooperative agreements with the University of Florida, Florida's community colleges should be in a position to respond to the existing and future needs for veterinary technicians in the State.

State of Florida
Department of Education
Tallahassee, Florida
Betty Castor, Commissioner
Affirmative action/equal opportunity employer